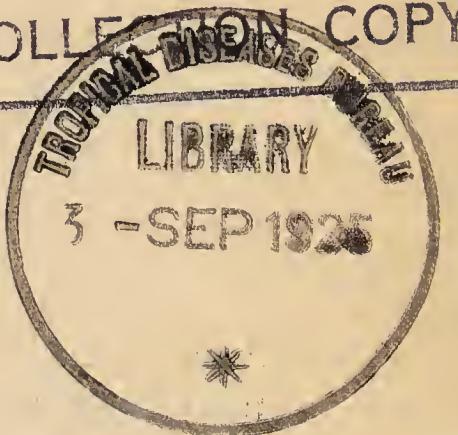
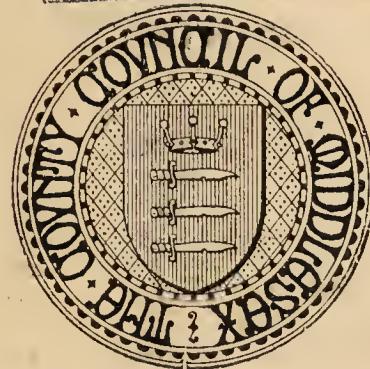


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Administrative County of Middlesex.

ANNUAL REPORT

OF THE

COUNTY MEDICAL OFFICER OF HEALTH

FOR THE

YEAR 1924.

London:

HARRISON AND SONS, LTD., ST. MARTIN'S LANE,
Printers in Ordinary to His Majesty.

1925.

[No. 699]

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Administrative County of Middlesex.

ANNUAL REPORT of the County Medical Officer for the Year 1924.

General and Vital Statistics.

AREA.—The area of the Administrative County of Middlesex is 148,692 acres (including land and inland water), and of this 100,669 acres are contained within the boundaries of the three municipal boroughs and 30 urban districts in the County, whilst 48,023 acres are within the boundaries of the four rural districts.

POPULATION.—Each year the Registrar-General supplies information as to the estimated population in the County. Due allowance is made in this estimate for the exclusion of persons who, although resident in the area, do not in fact belong to the County, such as the in-patients of the London Mental Hospitals at Colney Hatch and Hanwell, &c. ; on the other hand Middlesex residents who are living in the County Mental Hospitals at Napsbury (Hertfordshire) and Wandsworth (London) are included in the total. Two series of estimates are supplied, viz., one of the total civil and military population in the County, this figure is used in calculating birth-rates ; the other is an estimate of civilian population only, and is used for calculating death-rates, as military deaths are “transferred” to the home addresses of the soldiers, and, therefore, are not included in the statistics of deaths of the districts in which they actually occur. Six sanitary districts in the County contain various Military and Air Force establishments, and are affected by this procedure ; they are the Urban Districts of Feltham, Hendon, Heston and Isleworth, Ruislip—Northwood and Uxbridge, and the Rural District of Uxbridge. The following table gives information as to the enumerated (census) populations of 1911 and 1921, in addition to the estimated populations of 1924 for each of the 37 Sanitary Districts in the County, and affords evidence of the continued and rapid growth of the area.

General and Vital Statistics.

		Population, 1924, Estimated by Registrar-General.	
	Census 1911.	Total.	Civilian.
	Census 1921.		
<i>Urban.</i>			
Acton (Borough)	57,497	61,299	62,980
Brentford	16,571	17,032	17,590
Chiswick	38,697	40,938	40,610
Ealing (Borough)	61,222	67,755	68,370
Edmonton	64,797	66,807	70,450
Enfield	56,338	60,738	62,992
Feltham	5,135	6,326	7,230
Finchley	39,419	46,716	47,810
Friern Barnet	14,924	17,375	18,260
Greenford	1,064	1,461	1,488
Hampton	9,220	10,675	10,840
Hampton Wick	2,417	3,265	3,081
Hanwell	19,129	20,481	20,910
Harrow	17,074	19,469	20,270
Hayes	4,261	6,303	8,238
Hendon	38,806	56,013	57,760
Heston & Isleworth	43,313	46,664	47,700
Hornsey (Borough)	84,592	87,659	87,240
Kingsbury	821	1,856	2,090

General and Vital Statistics.

Southall-Norwood	...	...	26,323	30,287	31,800
Southgate	...	...	33,612	39,122	39,260
Staines	...	...	6,755	7,326	7,470
Sunbury	...	...	4,607	5,350	5,696
Teddington	...	...	17,847	21,213	21,840
Tottenham	...	...	137,418	146,711	153,100
Twickenham	...	...	29,367	34,790	35,100
Uxbridge	...	...	10,374	12,919	13,840
Wealdstone	...	...	11,923	13,433	13,910
Wembley	...	...	10,696	16,187	18,420
Willesden	...	...	154,214	165,674	169,100
Wood Green	...	...	49,369	50,707	51,840
Yiewsley	...	...	4,315	4,843	5,517
<i>Rural.</i>					
Hendon	...	...	14,160	17,656	18,530
South Mimms	...	...	2,805	3,134	3,358
Staines	...	...	21,926	25,063	26,250
Uxbridge	...	...	9,240	10,643	12,050
The County	...	...	1,126,465	1,253,002	1,293,010
					1,289,320

N.B.—The estimated populations for 1924 of the districts of Enfield and South Mimms are not strictly comparable with the census population of 1911 and 1921 of the respective districts, as an adjustment of boundary between the districts was made early in 1924, with the resultant transfer of some 90 persons from the district of Enfield to that of South Mimms. The estimated populations given, whilst correct for the purposes of the vital statistics of 1924, show an increase of 22 persons in the case of South Mimms and a decrease of 22 in the case of Enfield, from the estimated populations of the districts as now constituted.

BIRTHS AND BIRTH-RATES.—The total number of births belonging to the County occurring during 1924 was 21,993, of which 784 were illegitimate and 21,245 legitimate, and 11,135 were male infants and 10,858 females. This is equal to a birth-rate of 17·0 per 1,000 population, as compared with a rate of 18·1 per 1,000 during the preceding year. The following table gives the figures for the past five years, and shows that a decline in the birth-rate has been general throughout the kingdom, and that the birth-rates of London, the Great Towns, and England and Wales remain higher than that of the County :—

Year.	The County.		London.	Great Towns.	England and Wales.
	Births.	Rate per 1,000 living.	Rate per 1,000 living.	Rate per 1,000 living.	Rate per 1,000 living.
1920	29,842	23·3	26·5	26·2	25·4
1921	25,191	20·0	22·3	23·3	22·4
1922	23,775	18·7	21·0	21·4	20·6
1923	23,172	18·1	20·2	20·4	19·7
1924	21,993	17·0	18·7	19·4	18·8

The magnitude of the decline in birth-rate can be appreciated when attention is drawn to the County birth-rate 20 years ago, viz. 29·7 per 1,000, as compared with the present rate of 17·0 per 1,000. Notwithstanding this marked fall in the birth-rate, the population of the County continues to increase. To a certain extent this is accounted for by the influx of residents into the districts bordering upon the County of London, but much also is due to the remarkable saving of life during the past decade, as evidenced by the reduction in the rates of general and infant mortality. Information as to the birth-rate in each sanitary district in the County is given in the following Table, and for comparison the birth-rates for 1923 are inserted in italics. It will be noted that the rates vary considerably in the

different districts and, neglecting districts in which the total births were less than 500, the rates range from 19·3 in the district of Edmonton to 13·6 in the Borough of Hornsey. In the same group of districts it will be observed that the variations in birth-rates as compared with the previous year are very diverse ; whilst Twickenham and Wood Green have experienced a fall in rate of 2·7 per 1,000, Finchley and Heston and Isleworth show an actual increase. The number of births attended by midwives in the County was 10,218, or rather less than half the total number. Information as to the districts in which these births occurred is given later in the report.

BIRTHS AND BIRTH-RATES IN EACH DISTRICT, 1924.

General and Vital Statistics.

DISTRICT.	Nett number.	Rate per 1,000 living.	DISTRICT.	Nett number.	Rate per 1,000 living.
Kingsbury ...	56	26.8 (22.8)	Willesden ...	2,916	17.2 (18.9)
Hayes ...	214	26.0 (28.6)	Hanwell ...	...	16.9 (15.6)
Yiewsley ...	142	25.7 (29.2)	Twickenham ...	...	16.7 (19.4)
Feltham ...	159	22.0 (20.1)	Hendon (Urban) ...	938	16.2 (16.3)
Sunbury ...	124	21.8 (24.6)	Finchley ...	...	15.9 (15.7)
Uxbridge (Rural) ...	260	21.6 (21.7)	Uxbridge (Urban) ...	759	15.6 (19.1)
Staines (Urban) ...	155	20.7 (17.6)	Southall-Norwood ...	...	15.6 (17.1)
Brentford ...	356	20.2 (24.0)	Hendon (Rural) ...	287	15.5 (15.4)
Eldmonton ...	1,363	19.3 (21.8)	Friern Barnet ...	282	15.4 (16.5)
Staines (Rural) ...	506	19.3 (19.4)	Greenford ...	...	14.8 (23.3)
Ruislip-Northwood ...	189	18.9 (16.1)	Harrow ...	...	14.8 (14.7)
Tottenham ...	2,853	18.6 (20.4)	Wood Green ...	300	14.8 (17.4)
Wealdstone ...	257	18.5 (19.9)	Ealing (Borough) ...	762	14.7 (15.6)
Wembley ...	339	18.4 (19.3)	South Mimms (Rural) ...	980	14.3 (15.6)
Acton (Borough) ...	1,158	18.4 (18.7)	Hampton ...	...	13.7 (15.5)
Teddington ...	398	18.2 (20.2)	Hornsey (Borough) ...	...	13.6 (14.6)
Heston and Isleworth ...	843	17.7 (17.4)	Hampton Wick. ...	41	13.3 (10.5)
Enfield ...	1,108	17.6 (18.2)	Southgate ...	477	12.1 (13.4)
Chiswick ...	716	17.6 (17.7)			

Figures in brackets indicate Birth-rates for 1923.

DEATHS AND DEATH-RATES (ALL CAUSES).—The nett deaths belonging to the Administrative County occurring in 1924 was 13,348, which is equal to a death-rate of 10·4 per 1,000 of the population. This is somewhat higher than the rate for 1923, which was 9·5, but compares favourably with the death-rates in London (12·1), the Great Towns (12·3), and England and Wales (12·2).

The following table gives information as to the death-rates in Middlesex, and the other areas mentioned, over a period of 5 years :—

Year.	The County.		London.	Great Towns.	England and Wales.
	Deaths.	Rate per 1,000 living.	Rate per 1,000 living.	Rate per 1,000 living.	Rate per 1,000 living.
1920	12,271	9·6	12·4	12·5	12·4
1921	12,763	10·1	12·4	12·3	12·1
1922	13,477	10·6	13·4	13·0	12·9
1923	12,136	9·5	11·2	11·6	11·6
1924	13,348	10·4	12·1	12·3	12·2

The number of deaths and the nett death-rate for each sanitary district in the County are as follows :—

DEATHS AND DEATH-RATES IN EACH DISTRICT, 1924.

	Under 1 year of age.		At all ages.	
	No.	Rate per 1,000 births.	No.	Rate per 1,000 living.
<i>Urban—</i>				
Acton (<i>Borough</i>)	...	65	56	714
Brentford	...	40	112	214
Chiswick	...	53	74	511
Ealing (<i>Borough</i>)	...	46	47	759
Edmonton	...	77	56	698
Enfield	...	49	44	598
Feltham	...	9	57	77
Finchley	...	37	49	457
Friern Barnet	...	17	60	141
Greenford	...	—	—	11
Hampton	...	6	41	122
Hampton Wick	...	3	73	34
Hanwell	...	19	54	244
Harrow	...	15	50	181
Hayes	...	10	47	78
Hendon	...	40	43	531
Heston & Isleworth	...	51	60	507
Hornsey (<i>Borough</i>)	...	49	41	938
Kingsbury	...	6	107	21
Ruislip-Northwood	...	5	26	78
Southall-Norwood	...	31	63	287
Southgate	...	27	57	377
Staines	...	4	26	101
Sunbury	...	4	32	56
Teddington	...	21	53	226
Tottenham	...	180	63	1,567
Twickenham	...	29	49	412
Uxbridge	...	11	51	145
Wealdstone	...	15	58	126
Wembley	...	9	27	185
Willesden	...	205	70	1,756
Wood Green	...	32	42	513
Yiewsley	...	9	63	65
				11·8

	Under 1 year of age.			At all ages.		
	No.	Rate per 1,000 births.	No.	Rate per 1,000 living.		
<i>Rural.</i>						
Hendon	14	49	179	9·7		
South Mimms	1	22	27	8·0		
Staines	24	47	277	10·6		
Uxbridge	14	54	135	11·4		
The County	1,227	56	13,348	10·4		

The various causes to which the deaths in the County are attributed is shown on the table on page 12, and examination of this table discloses the fact that the chief causes of death remain as in previous years, viz.:—Heart disease, cancer, tuberculosis (all forms), bronchitis, pneumonia, and cerebral haemorrhage, &c.; whilst there has been a slight decrease in mortality due to the last-mentioned cause, in all other cases an increase has been experienced. This is especially notable in the cases of bronchitis, pneumonia and heart disease. The death-rates from these diseases during the past five years are as follows:—

	1920.	1921.	1922.	1923.	1924.
Heart disease	1·12	1·15	1·40	1·33	1·46
Cancer	1·11	1·19	1·22	1·27	1·31
Tuberculosis (all forms)	0·92	0·94	0·90	0·88	0·92
Bronchitis	0·71	0·73	0·80	0·61	0·80
Pneumonia	0·65	0·72	0·83	0·65	0·78
Cerebral haemorrhage, &c.	Not avail- able	0·56	0·57	0·58	0·54

Detailed information as to the different diseases which contributed towards the total number of deaths and the age groups at which these deaths occurred is given in the following table :—

CAUSES OF DEATH AT DIFFERENT PERIODS OF LIFE IN THE ADMINISTRATIVE
COUNTY OF MIDDLESEX, 1924.

Causes of Death. (1)	All Ages. (2)	0— (3)	1— (4)	2— (5)	5— (6)	15— (7)	25— (8)	45— (9)	65— (10)	75— (11)
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1. Enteric Fever ...	... 10	—	—	—	—	—	—	3	—	—
2. Smallpox ...	... 3	—	—	—	—	—	—	2	—	—
3. Measles ...	... 191	35	71	1	22	12	—	—	—	—
4. Scarlet Fever ...	... 16	—	—	20	16	2	—	1	—	—
5. Whooping Cough	... 69	30	1	8	25	59	5	—	—	1
6. Diphtheria ...	... 100	1	—	—	—	—	—	—	—	—
7. Influenza ...	... 414	10	7	8	13	14	73	—	—	—
8. Encephalitis Lethargica ...	... 45	—	—	—	5	7	13	10	83	89
9. Meningococcal Meningitis	5	2	—	—	1	1	—	—	2	—
10. Tuberculosis of Respiratory System	986	3	—	—	26	208	483	230	30	4

General and Vital Statistics.

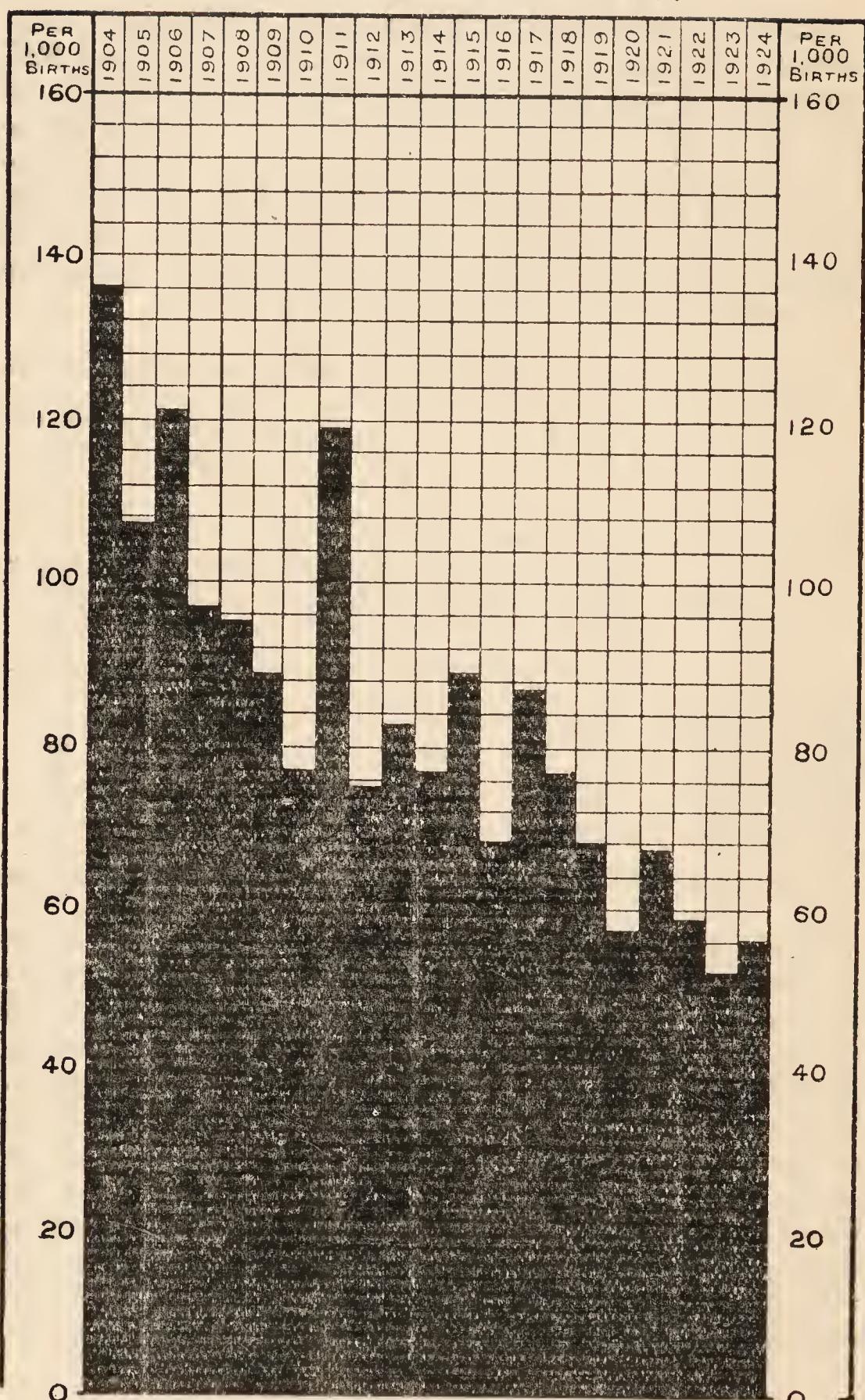
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11. Other Tuberculous Diseases	202	18	19	31	46	29	35	18	5	1
12. Cancer, Malignant Disease	1,690	3	2	3	3	5	125	762	501	286
13. Rheumatic Fever	42	—	—	3	13	10	7	5	4	—
14. Diabetes	... ...	126	—	—	1	1	16	51	38	16
15. Cerebral Haemorrhage, &c.	693	—	—	—	1	2	23	186	215	266
16. Heart Disease	... ...	1,885	—	—	2	17	155	538	561	574
17. Arterio-sclerosis	... ...	476	—	—	—	1	5	104	141	225
18. Bronchitis	... ...	1,034	78	14	—	—	28	157	260	478
19. Pneumonia (all forms)	... ...	1,008	190	122	51	22	95	246	124	127
20. Other Respiratory Diseases	... ...	1,169	5	5	5	3	17	58	33	40
21. Ulcer of Stomach or Duodenum	96	—	—	—	1	3	20	57	10	5
22. Diarrhoea, &c.	... ...	156	86	16	4	—	4	10	16	14
23. Appendicitis and Typhilitis	... ...	92	—	1	6	12	10	24	22	4
24. Cirrhosis of Liver	... ...	56	1	—	—	—	1	3	35	5
25. Acute and Chronic Nephritis	... ...	328	3	1	2	—	11	48	129	80
26. Puerperal Sepsis	... ...	34	—	—	—	—	—	8	—	—
27. Other Accidents and Diseases of Pregnancy and Parturition	... ...	33	—	—	—	—	—	5	1	—

INFANTILE MORTALITY.—The number of infants who died before attaining the age of one year during 1924 was 1,227, equivalent to an infantile mortality rate of 56, as compared with 52 in 1923, when the lowest rate ever recorded in the County occurred. In the following table the rates for the County, with the corresponding rates for London, the Great Towns, and England and Wales are given, from which it will be seen that the mortality rate for Middlesex compares favourably with the country generally :—

Year.	The County.		London.	Great Towns.	England and Wales.
	Births.	Deaths under 1 year.			
1920	29,842	1,696	57	75	80
1921	25,191	1,681	67	80	83
1922	23,775	1,387	58	74	77
1923	23,172	1,198	52	60	69
1924	21,993	1,227	56	69	75

Reference to the table on page 10 will show that there is considerable difference in the rates of infant mortality in the various districts in the County, but in almost all the rate is below the average for the country as a whole. Brentford with a rate of 112, and Kingsbury with a rate of 107, furnish the two noticeable exceptions, and, in the case of the latter district, the population is so small that the figure has little significance. The chart on page 16, showing graphically the County rate of infant mortality during the past 20 years, is of interest, proving as it does that the attack on preventable deaths of young infants has met, and is meeting with, a great measure of success.

INFANTILE MORTALITY.

PROPORTION OF DEATHS UNDER 1 YEAR
OF AGE PER 1,000 BIRTHS.

Infectious Diseases.

The year 1924 is memorable as the year of the opening of the British Empire Exhibition at Wembley. From the public health standpoint the exhibition was not unattended with risk, and raised many issues of considerable importance. Apart from the questions of housing, drainage, ventilation, &c., arising in connection with the resident population at the exhibition, three problems associated with disease called for careful and anxious attention. These were—(1) *the possibility of the introduction into this country and County of serious or rare epidemic disease.* This problem was associated with the employment at the exhibition of large numbers of natives from various parts of the Empire ; (2) *the possibility of widespread dissemination of infectious disease.* It is only necessary to call to mind the huge masses of people from all over the world who daily were in close contact at the exhibition, to appreciate the possible results of the presence amongst their numbers of persons in an infectious condition. In order to accommodate school children from all parts of England, Wales, Scotland, and Ireland wishing to visit the exhibition, a large hostel was established under private management in the district of Acton. The Board of Education recognized this institution, and organized parties of teachers and children stayed at the Hostel for varying numbers of nights throughout the period the exhibition was open. The Middlesex Education Committee consented to exercise general supervision over the arrangements at the Hostel, and insisted on the establishment of a “ hospital ” inside the Hostel, the appointment of a resident medical officer and staff of nurses, and the making by the proprietor of adequate arrangements with the authorities of hospitals for infectious and non-infectious diseases in order to deal with any emergency which might arise.

Valuable assistance was given by the Ministry of Health, whose medical officers supplied me with detailed information as to the occurrence of smallpox, &c., in various parts of the country, in order that precautions might be taken, so far as practicable, to avoid the introduction into the Hostel of teachers or children likely to be a source of infection.

Parties visiting the Hostel varied greatly in size, and stayed a variable number of nights, the average being about two. They were accommodated in four large "dormitories," and on the busiest nights of the summer over 3,000 teachers and children occupied the Hostel. In connection with the Exhibition a large Jamboree of boy scouts was held, and some thousands of boys were accommodated under canvas near the Exhibition; this also provided a possible centre of spread of infectious disease.

(3) *The possibility of danger to health arising in connection with the food supply of the Exhibition.*

Notwithstanding these potential dangers it is highly satisfactory to be able to report that, with the exception of a small outbreak of food poisoning which was not serious and was promptly suppressed, no untoward effects on the public health attended the holding of the Exhibition, and whilst every credit must be given to the excellent arrangements and medical supervision exercised in connection with the Exhibition and its ancillary activities, the County may well congratulate itself on its good fortune in this connection.

Note.—In the section of the Report dealing with infectious diseases, information as to notifications of disease relates to the period of 53 weeks from 30th December, 1923, to 3rd January, 1925.

SMALLPOX.—No excuse is needed in once again drawing attention to the increased prevalence of this disease in England during the past few years. Although as a whole the character of the disease has been mild, it must not be forgotten that smallpox contracted from a mild case may be severe in type and attended by fatal results. Outbreaks of smallpox have occurred and are occurring in different parts of the country, and efforts to suppress them, entailing serious expenditure of effort and money, have met with only partial success; in some instances the disease continues to occur in the districts affected, whilst in others it has disappeared in the original areas, but has broken out afresh in neighbouring districts. In England and Wales there were 973 cases

of smallpox notified during 1922 and 2,485 cases in 1923, whilst in 1924 the total has risen to 3,699 cases. When it is remembered that vaccination offers protection from this scourge, the large proportion of the population unprotected by this means cannot be viewed without disquiet.

In the County of Middlesex 17 cases of smallpox were notified during 1924; of these, 10 occurred in the district of Willesden and 7 in the district of Heston and Isleworth. The first Willesden case was a mild one, the disease occurring in a boy of three years of age who had not been vaccinated. As a result of his illness nine other residents in the same house contracted the disease, and of these three died. All possible precautions to prevent spread of infection were taken, and no further cases occurred in the County, but two of the "contacts" who had left the County subsequently developed the disease. These two "contacts" were under medical observation at the time and no further case resulted. Notwithstanding exhaustive inquiry, the source from which the original case (*i.e.*, the unvaccinated child of three years) contracted the disease was not discovered. The Willesden cases were treated at the Willesden Smallpox Isolation Hospital, Kingsbury.

The seven Heston and Isleworth cases occurred amongst the inmates of the West Middlesex Hospital, six being males and one a female. These cases arose in connection with a case of smallpox which was admitted to Epsom Poor Law Infirmary on 6th October, and removed to Hospital on 7th October. It appeared that this man, who was a pedlar, had been in Hitchin and Luton, where cases of smallpox had occurred, and on 26th September tramped from Watford through Willesden to Isleworth, where he was admitted to the Infirmary suffering from headache. He remained at first in the Infirmary, and subsequently in the infirm ward of the Workhouse until 6th October, when he was discharged, and walked to Epsom, being admitted to the Casual Ward at Epsom the same evening. On admission he was found to have a copious rash, which was diagnosed as smallpox and duly notified. From the facts which came to light, it was apparent that the man must have been suffering from smallpox whilst an inmate of the Isleworth Institution. On notification of the occur-

rence of the disease every effort was made to trace the numerous casuals, visitors, inmates and officers of the Institution with whom he had been in contact. Owing to the habits of many of the frequenters of such an Institution, it was not found possible in all cases to ascertain their movements, but the majority were traced and every possible precaution taken. The male patients were treated at the Dockwell Joint Smallpox Hospital, and the female patient was admitted to one of the institutions of the Metropolitan Asylums Board.

None of the 17 cases occurring in the County was fully protected by vaccination within seven years of the date of contact with the disease, and definite evidence was obtained in five cases that the patients had never been vaccinated. The fact that neither of the outbreaks assumed extensive proportions is an indication of the efficiency of the public health services in the County. The arrangements made by the County Council with the London County Council, whereby the services of the latter's expert advisers on smallpox are available for the purposes of the diagnosis of smallpox in Middlesex, have proved of great value, and are appreciated and utilized by the local Public Health Authorities in the County.

SCARLET FEVER.—A total of 2,321 cases was notified during the year, equal to a case-rate of 1·80 per 1,000 persons. These figures show a slight reduction on those of last year, when 2,378 cases were notified, and the case-rate was 1·87 per 1,000. Scarlet fever is a disease which tends to increase in prevalence in periods of from five to seven years, and the present low rate of attack, which is the lowest since 1918, is not likely to be maintained. In 1922 the case-rate was 4·06 per 1,000, and in 1921 the unusually high case-rate of 6·45 per 1,000 was recorded. This latter rate was the highest experienced in the County for over 20 years.

During 1924 the disease remained mild in character, and a total of 16 deaths occurred, which is equal to the low mortality rate of 0·01 per 1,000 persons. The corresponding death-rate for England and Wales was 0·02, for London 0·03, and for the 105 great towns 0·03 per 1,000 persons.

living. An exception to the mild character of the disease was observed in the district of Finchley. In this district scarlet fever was more prevalent than in the County as a whole, and 141 cases were notified during the 53 weeks ended 3rd January, 1925. This is equal to a case-rate of 2·95 ; the majority of the cases conformed to the mild type experienced elsewhere, but a small outbreak affecting about 20 cases was of a much more severe character. Prompt investigation led to the early discovery of the cause, and suitable action was successful in bringing this outbreak to an end.

For information as to the incidence of, and death-rate from, scarlet fever in each of the sanitary districts in the County see the table on page 28.

DIPHTHERIA.—The total number of cases for the year was 1,487, equal to a case-rate of 1·15 per 1,000 persons, as compared with 1,798 cases and a case-rate of 1·41 per 1,000 for 1923, and 3,248 cases and a case-rate of 2·57 per 1,000 for 1922. This is the lowest number of notifications recorded since 1918. The death-rate for the year was 0·08 per 1,000 ; in 1923 it was 0·09 per 1,000, and in 1922 0·21 per 1,000. In England and Wales for 1924 the death-rate from diphtheria was 0·06 ; in London, 0·12 ; and in the 105 Great Towns, 0·08 per 1,000.

The districts in which the incidence was most marked were Brentford, Feltham, Hanwell, and Heston and Isleworth. (See the table on page 28.)

With regard to the district of Hanwell, diphtheria has been prevalent for the past three years. In 1924, an outbreak of the disease occurred at the Central London District Schools, which are situated in Hanwell, and was responsible for 55 out of the total of 128 cases which were notified in this district during the 53 weeks ended 3rd January, 1925. Throughout the district the disease was of a severe type, and 23 deaths occurred, equal to a case mortality rate of 18 per cent. Very energetic steps were taken by the local Medical Officer of Health, and that these were attended by success is shown by the fact that during the last two months of the year no further cases occurred.

ENTERIC FEVER.—A total of 87 cases was notified, as compared with 58 cases in 1923 and 47 in 1922. Ten deaths occurred, equal to a death-rate of 0·01 per 1,000. The mortality rate also was 0·01 per 1,000 in England and Wales, London, and the Great Towns.

PUERPERAL FEVER.—During 1924 a total of 62 notifications of puerperal fever was received, but 7 of these were duplicates and the actual number of cases notified was 55, equivalent to a case-rate of 2·5 per 1,000 births. This is a decrease of 12 cases as compared with 1923, when the total notified was 67 and the case-rate 2·9 per 1,000 births. The number of cases for 1924 is the lowest on record since 1918. Of the total cases only 16 occurred in the practices of midwives, which is the same number as in 1923. From information furnished by certified midwives it appears they attended a total of 10,218 births, or, excluding 1,828 births which occurred outside the County boundary, a net total of 8,390. On this last-mentioned figure, the case-rate of puerperal fever in the practices of midwives, therefore, is 1·9 per 1,000 births as compared with 1·8 per 1,000 in each of the past three years.

The total number of deaths due to puerperal fever was 34, equal to a death-rate of 1·55 per 1,000 births, which is the same rate as last year. Out of the total number of deaths, 5 occurred in the practice of midwives, which is equivalent to a death-rate of 0·60 per 1,000 births attended by midwives.

OPHTHALMIA NEONATORUM.—A total of 82 cases was notified, equal to a case-rate of 3·73 per 1,000 births, as compared with 80 cases (the lowest number on record), and a case-rate of 3·45 per 1,000 births in 1923. Thus it will be noted that the satisfactory decrease in the occurrence of this condition is being maintained.

Of the 82 cases of ophthalmia notified during the year, 41 cases, or one-half, occurred in the practices of midwives. Reference should be made to the section of the Report dealing with the administration of the Midwives Acts for information as to the after-results of the treatment of the midwives' cases.

The following table affords information of the notifications of ophthalmia neonatorum during the past six years :—

Year.	Cases.	Rate per 1,000 Births.	Year.	Cases.	Rate per 1,000 Births.
1919	170	8.26	1922	131	5.51
1920	198	6.63	1923	80	3.45
1921	139	5.55	1924 ...	82	3.73

MEASLES.—Attention has previously been drawn to the tendency exhibited by this disease to become prevalent at intervals of about two years. In 1923 the number of deaths was 35, a remarkably low total ; in the year under review (1924) the number has risen to 191, which may be taken as definite indication of the increased prevalence which has been experienced. The following table, showing the number of deaths from measles during the past 10 years, demonstrates the biennial character of the variations in incidence of this disease :—

Year.	Deaths.	Year.	Deaths.
1915	484	1920 ...	112
1916	118	1921 ...	14
1917	258	1922 ...	130
1918	182	1923 ...	35
1919	53	1924 ...	191

CEREBRO-SPINAL FEVER.—This disease was made compulsorily notifiable in September, 1912, and the number of notifications during each year since has been as follows :— 1913, 7 ; 1914, 8 ; 1915, 115 ; 1916, 53 ; 1917, 54 ; 1918, 19 ; 1919, 33 ; 1920, 23 ; 1921, 9 ; 1922, 15 ; 1923, 11 ; 1924, 12. Of the twelve cases notified, three occurred in each of the first and third quarters, two in the second, and four in the last quarter of the year.

ENCEPHALITIS LETHARGICA.—The notifications of this complaint since the beginning of 1920 have been as follows :—

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.
1920	13	9	5	17
1921	37	13	—	3
1922	6	8	7	9
1923	12	6	7	6
1924	11	97	29	25

The total number of cases for 1924, viz., 162, was the highest recorded since the complaint became compulsorily notifiable on 1st January, 1919. As will be observed from the above table, the disease was prevalent to a marked degree in the second quarter of the year. The districts chiefly affected were Tottenham and Heston and Isleworth. The number of deaths for the year from encephalitis lethargica was 45.

ACUTE POLIOENCEPHALITIS.—Five cases were notified during the year, as compared with none in 1923 and 2 in 1922.

ACUTE POLIOMYELITIS.—A total of 28 cases was recorded in 1924 (26 of these occurring in the last two quarters of the year), as against 24 in 1923, 6 in 1922, 18 in 1921, 12 in 1920, and 29 in 1919.

PNEUMONIA.—Five cases of influenzal pneumonia were notified in 1924, as compared with 3 last year and 32 in 1922, while 1,576 cases of primary pneumonia occurred, as compared with 825 in 1923 and 1,056 in 1922. The aggregate for 1924, viz., 1,581, is the highest recorded since pneumonia became compulsorily notifiable on 1st March, 1919. The distribution of the disease throughout the year was as follows : 814 cases occurred in the first quarter, 334 in the second, 100 in the third and 328 in the fourth. The

marked increase in prevalence during the first quarter undoubtedly was due to the severity of the winter. The total deaths from pneumonia numbered 1,008, equal to a death-rate of 0·78 per 1,000 living, as compared with 825, or a death-rate of 0·65 per 1,000 in 1923, and 1,056 deaths, or a death-rate of 0·83 per 1,000 in 1922.

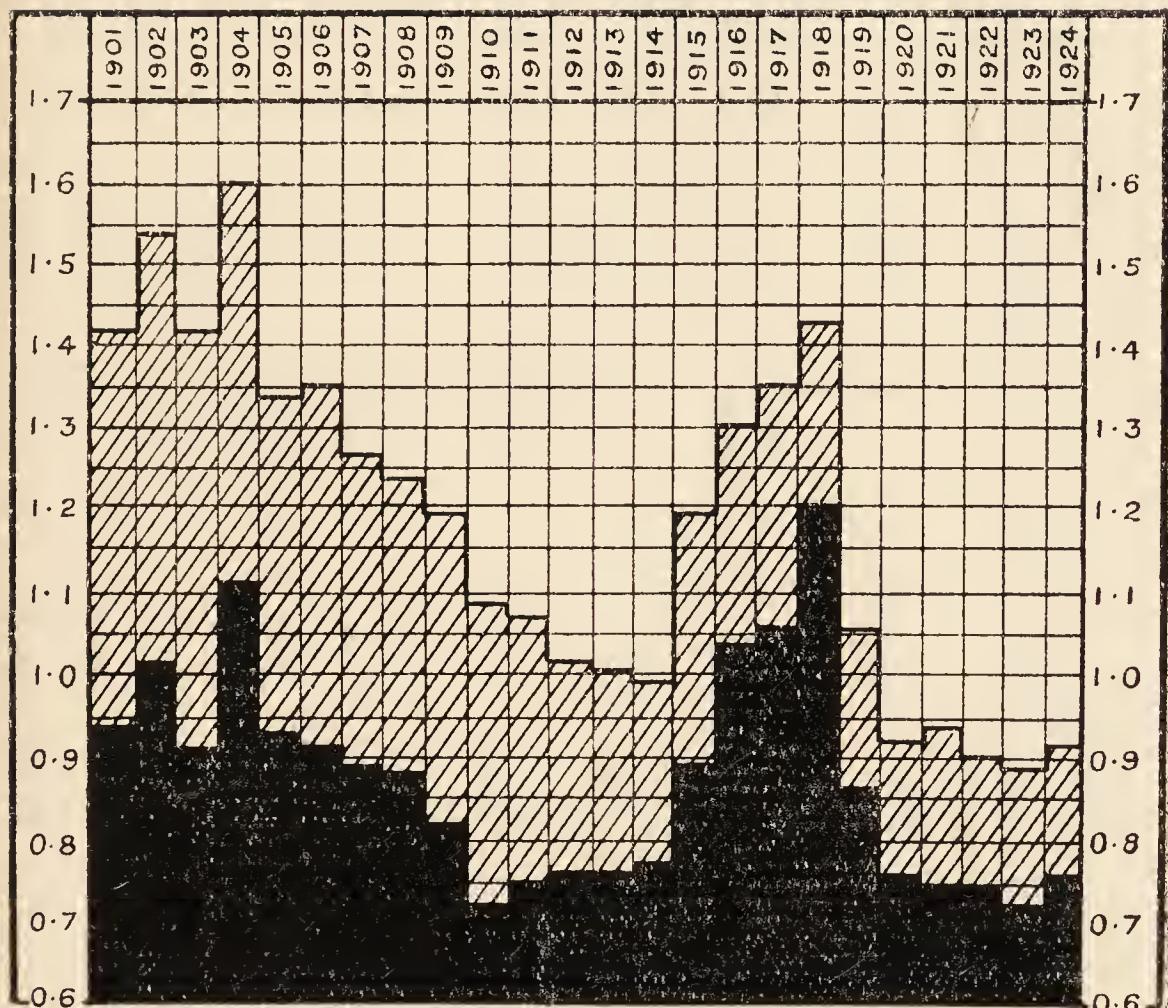
TUBERCULOSIS.—As will be seen from the accompanying table, the number of notifications again shows a slight increase compared with the previous year, whilst the number of deaths is higher than in any of the preceding four years. Last year it was suggested that if the increase in notifications was due to an actual increase in the incidence of the disease and not to more adequate notification, it was to be expected that the effect would be noticeable in the death-rate in future years. The experience of 1924 rather indicates that an actual increase in prevalence may be taking place, but the rise is not sufficiently marked to allow any definite conclusion to be reached. Meanwhile the fact that housing conditions in the County generally are gradually improving should exercise a beneficial influence on the disease. The following table affords information as to the number of notifications of, and deaths from, tuberculosis for the past 10 years, whilst the chart on page 27 shows in a graphic form the death-rate in the County attributable to tuberculosis during the past 24 years.

TUBERCULOSIS (NOTIFICATIONS AND DEATHS FOR PAST 10 YEARS).

Tuberculosis of Respiratory System.		All Forms of Tuberculosis.			
Number of Notifications.	Rate per 1,000 living.	Number of Deaths.	Death-rate per 1,000 living.	Number of Notifications.	Rate per 1,000 living.
1915 ... 2,143	1.81	1,060	0.89	2,732	2.31
1916 ... 1,894	1.62	1,203	1.03	2,431	2.08
1917 ... 1,930	1.68	1,216	1.05	2,474	2.15
1918 ... 2,218	1.93	1,386	1.20	2,621	2.28
1919 ... 2,150	1.75	1,013	0.86	2,577	2.19
1920 ... 1,887	1.48	974	0.76	2,218	1.74
1921 ... 1,604	1.27	944	0.75	1,931	1.53
1922 ... 1,529	1.21	948	0.75	1,823	1.44
1923 ... 1,565	1.23	916	0.72	1,944	1.52
1924 ... 1,630*	1.26	986	0.76	1,976*	1.53

* These figures are obtained from the weekly notifications of the district Medical Officers of Health in the County.
All the remaining statistics are furnished by the Registrar-General.

TUBERCULOSIS DEATH-RATES.



■ TUBERCULOSIS (ALL FORMS) - { DEATH RATE
PER 1,000 LIVING.

■ TUBERCULOSIS (PULMONARY) - { DEATH RATE
PER 1,000 LIVING.

COUNTY AND DISTRICT RATES, 1924.

Scarlet Fever, Diphtheria, Enteric Fever, Tuberculosis.

Number of cases notified, with case-rate per 1,000 living.
Number of deaths recorded, with death-rate per 1,000 living.

THE COUNTY	Scarlet Fever.			Diphtheria.			Enteric Fever.			Tuberculosis (all forms).				
	Cases Notified.		Deaths Recorded.	Cases Notified.		Deaths Recorded.	Cases Notified.		Deaths Recorded.	Cases Notified.		Deaths Recorded.		
	No.	Rate.	No.	Rate.	No.	Rate.	No.	Rate.	No.	No.	Rate.	No.		
<i>Urban Districts—</i>														
Acton (Borough) ...	108	1.71	1	0.02	43	0.68	5	0.08	—	—	94	1.49	56	0.89
Brentford ...	32	1.82	—	—	47	2.67	5	0.28	4	0.23	27	1.53	18	1.02
Chiswick ...	32	0.79	—	—	23	0.57	3	0.07	3	0.07	59	1.45	30	0.74
Ealing (Borough) ...	128	1.87	2	0.03	63	0.92	6	0.09	9	0.13	106	1.55	51	0.75
Edmonton ...	153	2.17	—	—	78	1.11	9	0.13	1	0.01	138	1.96	74	1.05
Enfield ...	80	1.27	1	0.02	14	0.22	2	0.03	1	0.02	106	1.68	60	0.95
Feltham ...	13	1.87	—	—	18	2.59	1	0.14	—	—	6	0.86	4	0.58
Finchley ...	141	2.95	3	0.06	77	1.61	2	0.04	1	0.02	32	0.67	36	0.75
Friern Barnet ...	28	1.53	—	—	5	0.27	—	—	4	0.22	21	1.15	15	0.82
Greenford ...	2	1.34	—	—	—	—	1	0.67	—	—	—	—	—	—
Hampton ...	21	1.94	—	—	—	—	14	1.29	—	—	6	0.55	7	0.65

Hampton Wick	...	1.30	16	0.77	0.77
Hanwell	...	0.70	—	0.64	0.64
Harrow	...	1.10	13	1.34	1.34
Hayes	...	1.10	13	0.73	0.73
Hendon	...	1.10	13	1.04	1.04
Heston & Isleworth	...	1.10	13	0.71	0.71
Hornsey (Borough)	...	1.10	13	1.44	1.44
Kingsbury	...	1.10	13	1.10	1.10
Ruislip-Northwood	...	1.10	13	1.18	1.18
Southall-Norwood	...	1.10	13	0.36	0.36
Southgate	...	1.10	13	1.46	1.46
Staines	...	1.10	13	1.32	1.32
Sunbury	...	1.10	13	1.41	1.41
Teddington	...	1.10	13	0.48	0.48
Tottenham	...	1.10	13	1.13	1.13
Twickenham	...	1.10	13	1.32	1.32
Uxbridge	...	1.10	13	1.23	1.23
Wealdstone	...	1.10	13	0.64	0.64
Wembley	...	1.10	13	1.48	1.48
Willesden	...	1.10	13	3	3
Wood Green	...	1.10	13	11	11
Yiewsley	...	1.10	13	1.13	1.13
<hr/>					
<i>Rural Districts.</i>					
Hendon	...	2.30	23	0.05	0.05
South Mimms	...	1.18	24	0.12	0.12
Staines	...	1.18	24	0.02	0.02
Uxbridge	...	1.18	24	—	—

NOTE.—The notifications of infectious diseases set out in the above table relate to the period of 53 weeks ended 3rd January, 1925. All the above statistics are supplied by the Registrar-General except as regards notifications of cases of tuberculosis, information as to which is obtained from the weekly returns received from the Medical Officers of Health of each district.

Smallpox Hospital Accommodation.

The necessity for adequate provision for the isolation of cases of smallpox remains in the forefront of public health administration. The liability of the introduction of the disease from places abroad where it is endemic is always present, but when to this is added the risk of spread of smallpox from sufferers in our own country, of whom during 1924 there were no less than 3,699, and the fact that the majority of the population, unprotected by vaccination, are in a susceptible condition, the magnitude of the responsibility of local authorities is apparent. The position in the County is unchanged from 1923, and is as follows :—

Twenty-six districts are included in the Middlesex Districts Joint Smallpox Hospital Board, viz., the Borough of Acton, the Urban Districts of Brentford, Chiswick, Edmonton, Enfield, Feltham, Finchley, Friern Barnet, Greenford, Hampton, Hampton Wick, Hanwell, Harrow, Hendon, Kingsbury, Southgate, Staines, Sunbury, Teddington, Tottenham, Wealdstone, Wembley, Wood Green, and the Rural Districts of Hendon, South Mimms and Staines.

The Board's Hospital is Clare Hall, South Mimms, and can accommodate about 250 patients.

Five districts are included in the Uxbridge Joint Hospital Board, viz., the Urban Districts of Hayes, Ruislip-Northwood, Uxbridge, Yiewsley, and the Rural District of Uxbridge.

The Board's Hospital is at Yeading, and can accommodate 24 patients, but is about to be enlarged.

Four districts have separate accommodation or arrangements, viz., Ealing, 12 beds ; Heston and Isleworth, 13 beds, jointly with Richmond (Surrey) ; Hornsey, arrangements made with Uxbridge Joint Hospital for use of 10 beds ; Willesden, Willesden

Smallpox Hospital, Kingsbury, would accommodate a limited number of cases if necessary, and the Council have approved plans for extension which, when complete, will enable 22 cases to be accommodated. Mention may be made of the circumstance that accommodation at Kingsbury Hospital for the 10 cases occurring in Willesden during 1924 was only possible owing to the fact that all were members of one family, and if any further cases had arisen provision for their isolation would have had to be obtained elsewhere.

One District has accommodation which is reported to be unsuitable, viz., Twickenham.

One district has no provision, viz., Southall-Norwood.

Scheme for the Prevention and Treatment of Tuberculosis.

The County Council's scheme for dealing with tuberculosis is comprehensive in character, and applies to the whole County, all members of the community, and all forms of the disease. The work under the scheme is divisible into two main sections—

- (a) Dispensary treatment.
- (b) Institutional treatment.

(a) DISPENSARY TREATMENT.

This includes the diagnosis, supervision and treatment as out-patients of residents in the County suffering from tuberculosis. For the purpose of administration the County is divided into six "dispensary" areas. In each of these a head dispensary has been established, and is in charge of a medical officer specially skilled and experienced in the diagnosis and treatment of tuberculosis. Eight

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branch dispensaries have been opened to meet the convenience of patients residing some distance from any of the head dispensaries. The branch dispensary in Harrow, which had to be closed in 1923, owing to the action of the landlord of the premises, remains closed, as no suitable accommodation has yet been found. There is no doubt that the absence of a dispensary in this populous neighbourhood is affecting adversely the value of the Council's scheme. The following is a list of the six tuberculosis dispensary areas of the County, together with the names of the Council's tuberculosis medical officers in charge and the addresses of the various dispensaries :—

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Area.	Districts served.	Tuberculosis Medical Officer.	Head Dispensary.	Branch Dispensaries.
1	Edmonton, Enfield ...	... Dr. H. Evans ...	56, Silver Street, Edmonton.	—
1A	Tottenham ... ...	... Dr. S. T. Davies ...	140, West Green Road, Tottenham.	—
2	Finchley, Friern Barnet, Hendon (Urban), Hornsey, Southgate, Wood Green, South Mimms.	Dr. J. R. B. Dobson ...	Chester Villa, High Road, N. Finchley.	10, Alexandra Road, Hornsey; 158, The Broadway, West Hendon.
3	Harrow, Kingsbury, Ruislip Northwood, Wealdstone, Wembley, Willesden, Hendon (Rural).	Dr. O. Bruce ...	3, Priory Park Road, Kilburn	—
4	Acton, Ealing, Greenford, Hanwell, Hayes, Southall-Norwood, Uxbridge (Urban), Yiewsley, Uxbridge (Rural).	Dr. F. R. B. Atkinson	Green Man Lane, Ealing.	School Clinic, Municipal Offices, Acton; 156, High Street, Uxbridge.
5	Brentford, Chiswick, Feltham, Hampton, Hampton Wick, Heston & Isleworth, Staines (Urban), Sunbury, Teddington, Twickenham, Staines (Rural).	Dr. E. E. Norton ...	Bell Road, Hounslow.	14, Heathfield Terrace, Chiswick; 12, Thames Street, Staines; 1, Staines Road, Twickenham.

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The following statistics afford information of the amount of work carried out at, or in connection with, the Dispensaries during 1924 :—

Number of persons examined for the first time ;—

Insured, 1,475 ; non-insured, 1,790 ; total, 3,265.

Results of examination—

Diagnosed as suffering from Tuberculosis	1,350
Diagnosed as not suffering from Tuberculosis	1,527
Undiagnosed : Remaining under observation	388
Total	3,265

[Included amongst this total are 109 tuberculous discharged soldiers or sailors who were dealt with as follows :—

Recommended for institutional treatment	57
Kept under observation at the dispensaries	52]

Number of patients under treatment, supervision or observation :—

On 1st January : Insured, 2,864 ; non-insured, 2,412 ; total, 5,276.

On 31st December : Insured, 2,911 ; non-insured, 2,364 ; total, 5,275.

Number of home visits made by the dispensary nurses, 4,455.

[Included amongst these are 2,495 visits to 973 tuberculous discharged soldiers and sailors, which is equivalent to 17·2 per cent. of the total visits made.]

Number of bacteriological examinations of the sputum of patients attending the dispensaries made by the Tuberculosis Medical Officers at the Dispensaries, 1,518.

Number of X-Ray examinations of patients attending the Dispensaries carried out for the Council's Tuberculosis Officers, under arrangements which have been made with the Prince of Wales's Hospital, Tottenham, 110.

From time to time cases arise which require special forms of treatment not available at the dispensaries, and the Council have made arrangements with certain of the London Hospitals whereby such treatment can be obtained by Middlesex patients. Included in this category are such treatments as Finsen light, artificial sunlight, refills for artificial pneumothorax in certain cases, &c.

During 1924 the Council paid for 599 such attendances made by 28 patients. In addition to these, 44 attendances were made by nine patients at the Council's Sanatorium at Harefield for artificial pneumothorax refills.

Nineteen shelters have been provided for the use of tuberculous patients residing at home, where the conditions are suitable for the erection of a shelter.

Contributions are asked from patients recommended for special forms of out-patient treatment when, on enquiry, the financial circumstances justify such a course. No charge is made by the Council for attendance at the tuberculosis dispensaries or for the use of shelters.

The Annual Joint Report of the Council's Tuberculosis Officers affords useful information as to the general working of the scheme. The following is an extract of their Report for 1924 :—

Co-operation between the Local Sanitary Authorities and the Tuberculosis Dispensaries is now very close. A weekly list of all notified cases in each area is sent by the local Medical Officers of Health to the County Medical Officer, who passes it to the Tuberculosis Officer concerned with as little delay as possible. The Tuberculosis Officers are thus made cognisant of all cases notified in their areas.

Every case of tuberculosis is notified to the local Medical Officer of Health, either by the general practitioner or by the Tuberculosis Officer. The latter gives the former the opportunity of first notifying the case, and if he finds the general practitioner has not done so, he takes steps to notify the case himself. Changes of address, removals, and all cases which seem to be "arrested" are also notified to the local Medical Officer of Health ; the latter cases are those which have remained completely quiescent for five years, if pulmonary, and for three years if surgical. They are reported to the local Medical Officer of Health for his consideration as to whether they shall be deleted from his register of tuberculous cases.

In most districts disinfection of rooms and bedding is carried out by the local Sanitary Authority when a patient dies, removes, or enters an institution.

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Reports on the environmental conditions of all tubercular cases are communicated to the local Medical Officer of Health in some areas, and in all parts of the County special attention is drawn to any sanitary defects, overcrowding or bad conditions.

Co-operation with General, Special and Children's Hospitals is quite satisfactory. A large number of cases are referred to the Dispensaries by such Institutions, and also by the Poor Law Authorities.

The School Medical Authorities send increasing numbers of children to the Dispensaries for an opinion, and, if necessary, for treatment, and the co-operation is of the closest. Special collaboration is undertaken in the case of the "pre-tubercular" type of child, and a large number of these children are sent by the Invalid Children's Aid Association to Convalescent Homes. This, in our opinion, is a most important side of anti-tuberculosis work.

The Welfare Centres send many cases, both mothers and children, for consultation at the Dispensaries.

The Dispensaries co-operate with the United Services Fund, British Red Cross, and the Order of Saint John of Jerusalem in the treatment and care of ex-service men, whether pensioners or not.

Co-operation between the Tuberculosis Officers and the Insurance and private practitioners is cordial and close. The majority of new cases seen at the Dispensaries attend on the advice of their own doctors.

Practically all notified cases are now seen at the Dispensary with the exception of those not in need of public assistance, and a very few who refuse to attend, and in the poorer and more populous Districts as many as 98 per cent. of the cases notified have been seen by the Tuberculosis Officer.

Personal consultations and visits of practitioners to the Dispensaries are becoming more frequent, and this not only applies to insured cases, but to all those in which a doctor is in attendance.

Cases in which the diagnosis is doubtful are kept under observation as long as may be necessary, but every effort is made to arrive at an early decision. Observation beds are available at Hounslow Dispensary for adults, and at Harefield Sanatorium for children, and are extensively used.

With the aid of frequent sputum examinations, X-ray reports, &c., an early diagnosis is generally possible.

Every effort is made to secure the examination of contacts by the Tuberculosis Officers.

It is still found to be most difficult to persuade healthy adult contacts to attend, especially those who are at work.

The Dispensary Nurses, in their periodic home visits, keep a watchful eye on all contacts, and any who appear to be delicate or failing are pressed to attend for examination.

In children the case is simpler, and the majority can be examined. They also have the advantage of being under the constant supervision of the School Medical Officers, who refer all doubtful cases to the Tuberculosis Officers.

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Arrangements made with local Hospitals for X-ray examinations and reports have proved helpful in diagnosis, and have been made extensive use of, but in our opinion this is but a confirmatory adjunct to the ordinary clinical examination which still holds the first place as a means for accurate diagnosis.

At the County Sanatorium, Harefield, a considerable number of cases are now treated by artificial pneumothorax, returning at intervals after discharge, for "refills." Although the results so far have been almost uniformly good, as yet it is too early to issue a definite report.

We are still of opinion that sanatorium treatment, in suitable cases, holds out a greater prospect of improvement than any other form of treatment. The educational value of sanatoria from a preventive standpoint is also very great.

Dental treatment is now provided by the Council for their patients at Harefield Sanatorium.

The Dispensary Nurses give all the advice and assistance possible in the cases of patients in their homes. The assistance of district nurses and nursing institutions is utilized, where available, in the case of bedridden patients.

Extra nourishment is allowed in a certain restricted number of cases, but not as a relief of destitution. Malt and oil is issued when necessary to non-insured patients in poor circumstances. No drugs are supplied at the Dispensaries.

Assistance is given in providing surgical instruments and apparatus when required as a necessary part of the treatment.

No Care or After-Care Committees have been established in connection with the Dispensaries in Middlesex. The Dispensary Nurses by frequent visits to their houses keep in touch with patients, and give all the advice and supervision necessary.

On discharge from institutions, patients considered fit for work but unable to return to their former occupation, are in some areas notified to the local Labour Exchanges with a suggestion as to the type of work for which they are considered suitable.

In view of the present economic conditions and the prevalence of unemployment it is very difficult to place these people, and "light work" would appear to be almost non-existent.

Use is made of the various Training Colonies in suitable cases where men who have become unfitted for their original occupation can be trained for another and more suitable one, but it has been found very difficult to obtain work afterwards in such new occupation.

Shelters are provided in suitable cases but the type of patient likely to make proper use of them is not a very numerous one.

Instruction and education in Sanatoria and Dispensaries on the care necessary to prevent spread of the disease are freely given. Sputum flasks are provided, and supervision exercised by the Dispensary Nurses. An attempt is made to segregate advanced cases in hospitals when there is a likelihood of massive infection, but it is found to be difficult to keep them away permanently, and some measure of compulsion should be available in these cases. The evils of sub-letting with resultant overcrowding undoubtedly influence the incidence of the disease.

The main difficulties again are those of housing and overcrowding, together with financial strain involved in a long illness in chronic cases.

Many wage-earners are unable to stay in institutions long enough to effect a cure, owing to financial stringency at home.

It is difficult to arrange for the care of children in the absence of mothers in an Institution, and many mothers are unable to go away, when so advised, for this reason.

(b) INSTITUTIONAL TREATMENT.

Pulmonary Tuberculosis.—At the commencement of the scheme for the treatment of tuberculosis, the County Council having no institutions of its own, arrangements were made to send tuberculosis patients to a number of existing sanatoria and hospitals, and agreements were entered into for the reservation of beds for Middlesex cases. The most important was with the Middlesex Joint (Small-pox) Hospital Board for the admission of tuberculous persons to Clare Hall Hospital. This agreement remains in operation, but most of the others have been cancelled, and with the exception of a few patients, who, on medical grounds, are specially recommended for treatment at an institution with particular climatic or other advantages, the majority of the cases of pulmonary disease are treated at :—

- (a) County Council Sanatorium, Harefield.—Accommodation, 129 males, 129 females, 64 children.
- (b) County Council Dispensary, Bell Road, Hounslow.—Accommodation, 9 males, 7 females.
- (c) County Council Hospital, Twickenham Road, Isleworth.—Accommodation, 40 males.
- (d) Clare Hall Hospital, South Mimms.—Accommodation, 120 males, 66 females.

During 1924 the Council equipped the County Sanatorium with a set of X-Ray apparatus in order to enable treatment by the induction of artificial pneumothorax to be undertaken in suitable cases. Up to the present the results of this form of treatment have proved encouraging. Towards the close of the year arrangements were made for the provision of dental treatment for patients in the Sanatorium.

For this purpose a dental surgery was equipped in one of the consulting rooms at the Sanatorium, and the Senior Dental Officer of the County Council now visits the institution weekly to carry out the necessary work. His visits are appreciated by the patients, and it is hoped definite benefit will result.

Surgical Tuberculosis.—The Council has not provided any institution of its own for the treatment of "surgical" tuberculosis, *i.e.*, tuberculosis affecting bones, joints, skin, &c., but has six cots reserved at the Victoria Home, Margate, for children suffering from these conditions. Advantage is taken of beds at existing institutions for all other cases, and during 1924 patients were maintained by the Council at the following :—

Adults.—All Saints' Hospital; Hendon Cottage Hospital; Mount Vernon Hospital, Northwood; Prince of Wales's Hospital, Tottenham; Royal Sea Bathing Hospital, Margate; St. Anthony's Hospital, Cheam; and various London Hospitals.

Children.—Alexandra Hospital for Hip Disease, Swanley; Children's Hospital for Hip Disease, Sevenoaks; "Clevedon," Broadstairs; Headington Orthopædic Hospital; Heatherwood Tuberculosis Hospital, Ascot; Hendon Cottage Hospital; Lord Mayor Treloar's Cripples' Hospital, Alton; Royal Sea-Bathing Hospital, Margate; St. Vincent's Cripples' Home, Pinner; and various London Hospitals.

As in the case of special forms of out-patient treatment, patients receiving in-patient treatment are required to contribute towards the cost according to their means. Careful enquiry into the financial circumstances of the family is made by the Council's officers, and the amount of contribution in each case (if any) is decided by the Health Sub-Committee or its Chairman, having in mind all the circumstances of the case. Tuberculous ex-service patients, where tuberculosis has been accepted by the Ministry of Pensions as connected with the Great War, are paid for by the Ministry, and no contribution is asked for

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by the Council ; also in the case of certain institutions the authorities admit patients at special rates on the condition that they may obtain contributions from patients if circumstances justify this, and in these cases also no contribution is sought by the Council.

The total number of persons sent to institutions, 1st January to 31st December, 1924, was 1,537, viz. :—

	Ex-service (T.D.S.)	Sanatoria.		Hospitals.		Surgical Cases.	
		M.	F.	M.	F.	M.	F.
Insured	297	171	173	62	39	19
Non-insured—							
Adults	55	129	37	89	7	18
Children under 16	54	49	10	13	58	39
Total	528	349	292	164	118	76

On the 31st December, 1924, there was a total of 691 patients in institutions, viz., ex-Service patients 62, insured persons 336, and non-insured persons 293 (127 adults and 166 children under 16).

The average number of patients under treatment in institutions, which was 380 in 1917, 442 in 1918, 481 in 1919, 594 in 1920, 674 in 1921, 687 in 1922, 692 in 1923, rose to 700 in 1924. The maximum number at one time was 720 during October, and the minimum was 658 during January.

The following table showing the immediate result of treatment is based upon particulars provided by the Tuberculosis Officers, and refers to patients treated in Institutions under the Council's scheme.

The classes and groups of patients suffering from pulmonary tuberculosis, referred to in the table, are in accordance with the suggestions contained in a memorandum issued by the Ministry of Health, and are as follows :—

Class A, viz., cases in which tubercle bacilli have never been demonstrated in the sputum ; and

Class B, viz., cases in which tubercle bacilli have at any time been found. It should be noted that a patient originally in Class A is transferred to Class B at any stage in the course of treatment if and when tubercle bacilli are found ; while, on the other hand, a patient who is once placed in Class B can never revert to Class A. Class B is further sub-divided into three Groups as follows :—

Group 1.—Cases with slight constitutional disturbance, if any, e.g., no marked acceleration of pulse nor elevation of temperature except of very transient duration is present ; gastro-intestinal disturbance or emaciation, if present, is not excessive.

The obvious physical signs are of very limited extent as follows :—

Either present in one lobe only and in the case of an apical lesion of one upper lobe not extending below the second rib in front or not exceeding an equivalent area in any one lobe ; or where these physical signs are present in more than one lobe they are limited to the apices of the upper lobes and do not extend below the clavicle and the spine of the scapula.

No complication (tuberculous or other) of prognostic gravity is present. A small area of dry pleurisy does not exclude a case from this group.

Group 3.—Cases with profound systemic disturbance or constitutional deterioration ; with marked impairment of function, either local or general, and with little or no prospect of permanent improvement.

All cases with grave complications, whether tuberculous or not, are classified in this group, e.g., diabetes, tuberculosis of larynx or intestine, &c.

Group 2.—All cases which cannot be placed in Groups 1 and 3.

Return showing the immediate results of treatment of patients* discharged from Residential Institutions during the year 1924.

Duration of Residential Treatment.

* The definition of "patient" does not include "pretuberculous" children.

Scheme for the Prevention and Treatment of Venereal Diseases.

The arrangements made by the County Council for the treatment of venereal diseases, in compliance with the requirements of the Public Health (Venereal Diseases) Regulations, 1916, which were in force in previous years, were continued during 1924.

These include the following :—

- (i) Agreements, jointly with London and other authorities, for the diagnosis and treatment of patients at the London Hospitals.
- (ii) Agreement with the Prince of Wales's Hospital, Tottenham, for the same purpose.
- (iii) Arrangements, jointly with Surrey County Council, for diagnosis and treatment at the Royal Hospital, Richmond.
- (iv) Publicity arrangements.
- (v) Arrangements for the free supply of arsenobenzol compounds to approved practitioners.

As regards the above, the facilities provided were similar to those of previous years, but in the Joint London Scheme, referred to under (i), certain alterations and improvements were put into effect.

The general trend of these improvements is to encourage the establishment of clinics open all day and every day. By this arrangement persons suffering, or suspecting themselves to be suffering, from venereal disease are able to call at the clinic without appointment at any time, and are sure of obtaining skilled medical advice and treatment, if required. Experience is proving that the "all-day" clinic is the greatest advance which recently has been made in the scheme for treatment of venereal diseases. During 1924 some extensions and additions to the accommodation in hostels available for pregnant single women suffering from venereal diseases also were made, and these hostels are helpful in dealing with a very difficult aspect of the venereal disease problem.

A return of the number of Middlesex patients treated during 1924 is given on page 46. This shows separately the

number dealt with at the Hospitals in the Joint London Scheme, the number treated at the Prince of Wales's Hospital, Tottenham, and the number treated at Richmond Hospital, Surrey.

The total number of new cases from all areas dealt with at the London Hospitals was 25,573, of which 1,766 or 6·9 per cent. are credited to Middlesex, and the remainder to the other participating authorities in the Joint Scheme.

Compared with the figures of the previous year, the *number of new patients from Middlesex* shows an increase of 132 in the case of the London Hospitals, and a decrease of 49 in the case of the Prince of Wales's Hospital. As regards Richmond Hospital the number of new patients from Middlesex was 89 as compared with 71 in the preceding year. The *attendances by Middlesex patients* increased by 70 at the London Hospitals, decreased by 922 at the Prince of Wales's Hospital, and decreased by 203 at Richmond Hospital.

An encouraging feature of these statistics is that the proportion of persons presenting themselves for examination and found not to be suffering from venereal disease shows the greatest increase experienced since the scheme was established. This is probably in part an indication of the greater convenience which the all-day clinics referred to above have afforded, but may also be taken to be an indication of greater public appreciation of the risks of venereal diseases and the serious consequences attendant upon their neglect in the early stages.

The proportion of the total cases examined and found free from venereal disease in 1920 was 25 per cent., in 1921 it had increased to 27 per cent., and in 1922 to 29 per cent.; in 1923, however, the proportion remained stationary at 29 per cent., but during the year under review it has risen to 33·4 per cent.

The number of doctors practising in Middlesex who applied during 1924 to be placed on the approved list, entitling them to receive free supplies of arsenobenzol compounds, was 4. The total number now is 50. In addition to these, there is a considerable number of doctors in London, by many of whom Middlesex residents would be treated, who also are on the list of approved practitioners.

MIDDLESEX Patients treated at

Maternity and Child Welfare.

The County Council's scheme for Maternity and Child Welfare work applies to 14 districts in the Administrative County, viz., the urban districts of Feltham, Friern Barnet, Greenford, Hampton Wick, Hayes, Kingsbury, Ruislip-Northwood, Staines, Sunbury and Yiewsley, and the rural districts of Hendon, South Mimms, Staines and Uxbridge. Included in the Council's original scheme were provisions for many branches of "Welfare" activity, but the Council decided to develop these gradually as experience indicated the need. Later, financial stringency led to a halt in new proposals, and efforts were concentrated on the consolidation of existing activities.

Welfare Centres.—No additional Centres have been opened during 1924, but the very marked growth which has attended certain of the Centres has created a condition which the Council will need to consider during the coming year. Details showing the addresses, times of meetings, and medical officers in charge of the Council's 23 Welfare Centres are set out in the following table :—

Maternity and Child Welfare.

Sanitary District.	Address of Welfare Centre.	Day and Time on which Centre is held.	Medical Officer in Charge.
<i>Urban—</i>			
Feltham	The Hut, Council School Congregation Church Hall, Believ-	Tuesday ... Wednesday ...	P.M. 2.30 2.30
Friern Barnet	ue Road.	Wednesday ...	... Dr. Proctor.
	Freehold Social Institute, Hamp-	Friday ...	... Dr. Spreat.
	den Road.		
Hampton Wick	Council School ...	Friday ...	... Dr. Heddy.
Hayes	Wesleyan Chapel Schoolroom, Station Road.	Tuesday ...	... Dr. Shelley.
Ruislip-Northwood	Eastcote—Church Hall ... Northwood—St. John's Presby- terian Church Hall, Hallowell	Wednesday ... Tuesday ...	2.30 2.30
	Road.		... Dr. Hignett.
	Ruislip—Church Institute ... Friends' Meeting House, High	Thursday ... Wednesday ...	2.30 2.30
	Street.		... Dr. Proctor.
Staines	... ...	
Sunbury	139, Vicarage Road	Wednesday ...	2.30
Yiewsley	Wesleyan Chapel School Room	Tuesday ...	2.30
			... Dr. Heddy. Dr. Norrington.

<i>Rural—</i>	Hendon	...	...	Edgware—Whitchurch Institute, Whitchurch Lane.	Wednesday	2.30	...	Dr. Burn.
				Harrow Weald—Memorial Hall	Thursday	2.30	...	Dr. Burn.
				Headstone—St. George's Church Hall.	Tuesday	2.30	...	Dr. Burn.
				Pinner—Free Church Lecture Hall, Payne's Lane.	Friday	...	3.0	...
				Potters Bar, Village Hall	Wednesday	2.30	...	Dr. Daniel.
				South Mimms—St. Giles's Parish Room.	Thursday	...	2.30	...
				Ashford — Wesleyan Church School Room, Clarendon Road.	Thursday	...	2.30	...
				Harlington—Village Hall, Cherry Lane.	Tuesday	...	2.30	...
				Shepperton Green — Council School.	Monday	...	2.30	...
				Harefield—Memorial Hall	Thursday	...	2.30	...
				Hillingdon—Salem School, High Road, Hayes End.	Thursday	...	2.30	...
				Northolt—Church Hall	...	...	2.30	...

No Welfare Centres are in operation in the districts of Greenford and Kingsbury. With regard to the former, the Centre originally established in the district was discontinued in 1922, and the residents in Greenford now attend the Northolt Centre in Uxbridge Rural District. Residents in Kingsbury attend the County Council's Centre at Edgware in Hendon Rural District, with the exception of those resident in the south-east portion of the district. The Hendon Urban District Council have agreed to allow the latter to attend the District Council's Welfare Centre at West Hendon, which is conveniently situated for the purpose, and the County Council contribute towards the cost of the Centre.

The Centres meet weekly, in three instances a medical officer attends alternate weeks, but in all others a doctor is in attendance weekly. At all sessions one (or more) of the Council's staff of nurses engaged on combined duties as Health Visitors and School Nurses is present. The essential function of the Centres is the preservation of health of the normal infant rather than the treatment of the sick, although advice and assistance in the treatment of minor ailments may properly be afforded at the Centres. With this aim in mind mothers attend the Centres with their babies and children under five years of age, and are given appropriate advice by the medical officers in the bringing up of their infants. The babies are weighed at each attendance, any evidence of deviation from normal progress in development is noted, and steps are taken to ascertain and remove the cause, if this be possible. Voluntary workers render valuable aid at the meetings of the Centres, and representative Local Welfare Committees assist in keeping the activities of the Centres in touch with local needs. All the doctors in attendance at the Centres are members of the Council's staff of seven whole-time officers engaged on work in connection with Maternity and Child Welfare and School Medical inspection and treatment, with the exception of the Medical Officers at the Welfare Centres in Friern Barnet and Ruislip-Northwood. By arrangement the local Medical Officers of Health of these two districts, who were in attendance at the Centres at the time these were transferred from the control of the District Councils.

to the County Council, continue to attend the Centres, and for this purpose act as part-time Medical Officers of the County Council.

Tea is served to mothers attending the Centres, dried milk, virol, &c., are sold at cost price or provided at a reduced price or free of charge in cases of necessity; educational talks are given by the medical officers when practicable, and every effort is made to ensure that the Council's Welfare Centres fulfil their function as active agents for the improvement of the health and physique of infants and young children.

One of the most valuable indications of the efficiency of "Welfare" work in any area is afforded by the returns showing the rate of infantile mortality. In the Council's Maternity and Child Welfare Area during 1924 this rate was 48 per 1,000 births, as compared with the County rate of 56 per 1,000 births, and the rate for England and Wales of 75 per 1,000 births.

Dental Treatment.—A joint scheme for the dental treatment of expectant and nursing mothers and children under five years of age, to be carried out by the Council's staff of Dentists and Dental Nurses engaged on school dental treatment, was approved by the Council in 1920, and was in operation for a short time in 1921. Consequent on the resignation of one of the Dental Officers, and the urgent need for curtailment of expenditure, dental treatment for mothers and children temporarily was discontinued. In 1924 the Council decided to reinstate the joint scheme, and have filled the vacancies in the Dental Staff. In consequence, treatment for expectant and nursing mothers and children under five years of age will be available from the commencement of 1925. The staff engaged on the joint scheme consists of one Senior Dental Officer, four Dental Officers, and five Dental Nurses.

Ophthalmic Treatment.—Skilled ophthalmic treatment provided by the Education Committee for school children also is available for cases referred from Welfare Centres, but the necessity for this has not proved great.

Central Ante-Natal Clinic.—Under the Council's scheme the 23 Welfare Centres serve also as ante-natal clinics,

where women during their pregnancies are kept under observation by the Council's Medical Officers. The number of women attending the Centres for ante-natal advice is increasing, and in November, 1924, the Council decided to develop this branch of the work by instituting a Central Ante-natal Clinic, under the care of J. S. Fairbairn, Esq., F.R.C.S., F.R.C.P., Senior Obstetrical Physician and Lecturer on Midwifery and Diseases of Women at St. Thomas's Hospital. The Council's Assistant Medical Officers in charge of Welfare Centres will refer cases requiring a specialist's opinion to the Central Clinic, and will themselves accompany the cases so as to receive directions as to their further care.

X-ray Examinations and Institutional Treatment.—Arrangements also have been made with St. Thomas's Hospital, on terms favourable to the County Council, for the making of X-ray examinations, and, if necessary, the reception into the hospital of cases from the Council's area found to require treatment or observation in an institution.

This extension of the scheme is awaiting the approval of the Ministry of Health.

The total number of *meetings* of Welfare Centres held in 1924 was 1,174.

The number of *new cases* attending the Centres was :—

Expectant mothers	...	...	...	...	118
Infants...	...	...	...	...	1,020
Children (1 to 5 years)	...	...	...	...	531

The *attendances* at the Centres were :—

Expectant mothers	...	...	...	...	986
Other mothers attending with infants				...	25,195
Infants	...	...	...	...	16,495
Children (1 to 5 years)	...	...	...	...	18,103
<hr/>					
Total attendances	...	...	...	...	60,779

The *average attendance* of infants and children at each session of the Centres was 29·47, as compared with 25·65 per session in the previous year, and 24·85 in 1922.

The number of *home visits* paid by the Health Visitors in connection with Maternity and Child Welfare was :—

Ante-natal visits	...	...	...	...	1,722
Visits to babies under 1 year					12,289
Visits to children (1 to 5 years)					16,669
					—
Total	...	...	...	30,680	—

This total entailed 20,371 visits to the residences of the individuals concerned.

The number of home visits made during the year shows an increase of 3,558 on the number made in 1923, and an increase of 5,956 on the visits during 1922.

Information as to the actual amounts of dried milk, Virol, &c., issued from the Welfare Centres during the calendar year 1924 is not available, as all accounts, &c., are balanced at the close of the financial year. The following, however, shows the amount and cost of various articles supplied at cost price, on part payment or free of charge during the financial year ended 31st March, 1925 :—

1924-25.	Amount.	Cost price.	Contributed by Mothers.	Charge on Scheme.
Dried milk	lbs. 12,459	£ 910 0 0	£ 617 0 3	£ 292 19 9
Virol or similar substances	3,756	221 2 9	210 13 4	10 9 5
Cod liver oil, malt, &c.	1,456	56 11 6	28 0 0	28 11 6
Fresh milk	—	522 5 2	11 12 9	510 12 5
Total	—	1,709 19 5	867 6 4	842 13 1

The nett charge on the County Council shows an increase on the total cost for the financial year 1923-24 (see below), which is largely accounted for by the increased issue of fresh milk.

1923-24.	Amount.	Cost price.	Contributed by Mothers.	Charge on Scheme.
Dried milk	lbs. 12,628	£ } 1,168 13 8	£ 899 5 0	£ 269 8 8
Virol or similar substances	3,171			
Cod liver oil, malt, &c.	1,252	50 18 6	32 7 3	18 11 3
Fresh Milk	—	359 17 1	0 17 9	358 19 4
Total	—	1,579 9 3	932 10 0	646 19 3

Provision of Midwives.—In order to provide for areas in which the existing facilities for attending to women during their confinements were inadequate, the Council appointed three whole-time midwives, who work in Greenford, Yiewsley, Ruislip-Northwood, and adjoining neighbourhoods.

During 1924 the Council's whole-time Officers attended 191 cases, either in their capacity as midwives or as maternity nurses to cases under the care of doctors. During the financial year ended 31st March, 1924, the County Council, with the approval of the Ministry of Health, made a grant of £25 to the Harmondsworth Nursing Association in respect of midwifery services in the parish of Harmondsworth.

Lying-in Home.—Under arrangement with the Harrow, Wealdstone and District War Memorial Maternity Hostel, two cases were admitted from the Council's area during 1924.

Administration of the Midwives Acts, 1902 and 1918.

Towards the close of 1923 notices and forms were sent to all midwives on the Midwives Roll, residing or practising in the County, calling attention to the obligation of notifying to the County Council their intention to practise during the following year, if such was the case. Further, letters of a similar character were sent to all newly qualified midwives whose residences were stated to be in Middlesex when the revised Midwives Roll for 1924 was received. In addition to the replies consequent on this procedure, notifications from midwives coming to reside in the County, either permanently or temporarily, during the course of the year also were received, and in all, 341 certified midwives notified their intention to practise, of whom 28 were only temporarily engaged in the area. The following table affords information as to the districts in which the midwives resided :—

Midwives Acts.

55

District.		Total number of midwives practising during 1924.	Removed from district during 1924.	Practising temporarily during 1924.	Number in district end of 1924.	Total number of midwives practising during 1924.	Removed from district during 1924.	Practising temporarily during 1924.	Number in district end of 1924.	Total number of midwives practising during 1924.	Removed from district during 1924.	Practising temporarily during 1924.	Number in district end of 1924.
<i>Urban—</i>													
Acton (Borough)	...	9	1	1	7	Southgate	...	...	9	3	2	—	7
Brentford	...	11	1	—	6	Staines	...	...	3	—	1	—	2
Chiswick	...	11	—	—	11	Sunbury	...	...	2	—	—	—	2
Ealing (Borough)	...	15	—	2	13	Teddington	...	...	3	—	—	—	3
Edmonton	...	19	5	—	14	Tottenham	...	...	22	2	1	—	19
Enfield	...	14	3	—	11	Twickenham	...	...	15	3	3	—	12
Feltham	...	3	—	—	3	Uxbridge	...	...	3	—	—	—	3
Kinchley	...	2	—	—	3	Wealdstone	...	...	2	—	—	—	2
Friern Barnet...	...	2	—	—	2	Wembley	...	...	7	1†	1	—	5
Greenford	...	1	—	—	1	Willesden	...	...	33	3	2	—	28
Hampton	...	3	—	—	3	Wood Green	...	...	11	—	2	—	9
Hampton Wick	...	—	—	—	—	Yiewsley	...	...	3	—	—	—	3
Hanwell	...	2	—	—	—	Rural—							
Harrow	...	5	—	—	1	Hendon	...	...	6	—	—	—	6
Hayes	...	—	—	—	—	South Mimms	...	...	—	—	—	—	—
Hendon	...	—	—	—	—	Staines	...	...	10	—	1	—	9
Heston and Isleworth	...	15	1†	3*	17	Uxbridge	...	...	2	—	—	—	2
Hornsey (Borough)	...	9	1	—	14	Extra County	...	...	60	—	—	—	53
Kingsbury	...	1	—	—	—	Totals ...	...	...	341	23	28	28	290
Ruislip-Northwood	...	2	—	—	—								
Southall-Norwood	...	6	—	—	—								

* 1 removed from Roll by the Central Midwives Board.

† 2 voluntary removals from Roll.

It will be seen that a total of 290 practising midwives remained in the County at the close of the year, which is an increase of 24 on the number at the end of 1923. In the majority of the sanitary districts the supply of midwives is adequate to meet the needs of the people, and although there are no midwives permanently resident in the districts of Hampton Wick, Kingsbury and South Mimms, with the exception of the last named, little difficulty is experienced in obtaining the services of midwives from neighbouring areas if required. The position with regard to South Mimms is not satisfactory, but up to the present no practical solution has been found, and fortunately the total number of births in the village of South Mimms is small. It may be added that the County Council, under their scheme for Maternity and Child Welfare, have power to provide a temporary resident midwife to deal with any individual case if accommodation can be found, and other arrangements prove impracticable, and this procedure would be followed if necessary.

In addition to the 341 certified midwives who notified their intention to practise in the area, other fully qualified midwives reside in Middlesex and either are employed at Poor Law Institutions, and on this account exempted from supervision by the Local Supervising Authority, or are employed in other duties, and are not actively engaged in the practice of midwifery.

The total number of certified midwives, residing or practising in the County during 1924 is as follows :—

Midwives who have notified their intention to practise	...	...	...	...	341
Midwives employed in Poor Law Institutions					20
Midwives not engaged in midwifery practice					497
					—
Total	...	...	...	858	—
					—

Qualifications of Midwives in Practice.—The qualifications of the practising midwives are given below :—

281 have passed the Examination of the Central Midwives Board.

- 27 possess the certificate of the London Obstetrical Society.
- 4 possess hospital certificates other than the L.O.S. certificate.
- 29 were enrolled by reason of having been in *bona fide* practice previous to the passing of the Act.

The number of practising midwives whose names were included on the Midwives Roll in virtue of their having been in *bona fide* practice before the Act came into operation has now decreased to 29, whilst the number of fully trained women possessing the C.M.B. certificate and practising in the County has increased to 281. When compared with the totals of 1914, viz., 71 *bona fide* and 208 fully trained midwives, or even the totals of last year, viz., 36 and 265 respectively, it appears there is every prospect that before long midwifery practice in the County will be restricted to women who have had a reasonably adequate training. The importance of a thorough knowledge and appreciation of surgical cleanliness, as an ideal to be aimed at, in the conduct of labours and the management of women during the puerperium, has been realized for some considerable time, and the question of increasing the period of training required before a candidate may enter for the Certificate of the Central Midwives Board is now under consideration. Having regard to the great need for additional midwives in some parts of the country, it is doubtful if the time is ripe for insisting upon all candidates having received a full nursing training at a hospital or similar institution prior to commencing the study of midwifery. In my opinion, however, the responsibility of midwifery practice is so great, and the risks to patients which may result from lack of knowledge of the principles and practice of antiseptics and asepsis, knowledge which can be assimilated only as a result of long training, that I trust the requirement of a full nursing training, antecedent to midwifery training, ultimately will be insisted upon.

Uncertified women.—During 1924 no evidence was obtained that any uncertified woman was practising as a midwife "habitually and for gain." Cautionary letters, however,

were sent in five cases in which an unqualified woman had been in attendance on a patient.

Number of Births attended by Midwives.—At the close of each year midwives who have notified their intention to practise are requested to furnish a return giving information as to the number of cases attended by them. Owing to removals from the County, delay in sending in the returns, deaths, &c., it is evident that the figures so obtained cannot be treated as absolutely accurate, but they are sufficiently correct to afford useful information as to the extent to which midwifery is undertaken by midwives in the County.

From these returns it is found that midwives attended 10,218 births, or 46·5 per cent. of the total number of births registered in the County during 1924, and in addition acted as nurses to 1,621 cases under the care of doctors. Of the births attended by midwives, 1,251 (or 12·2 per cent.) were attended by *bona fide* midwives, and of the 1,621 doctors' cases, in 108 (or 6·7 per cent.) *bona fide* midwives were present as nurses.

Districts in the County :—

		Births where the Midwives acted as Nurses, 1924.		Births attended by Midwives residing in each District, 1924.		Births attended by Midwives residing in each District, 1924.		Births where the Midwives acted as Nurses, 1924.	
<i>Urban</i> —									
Acton (Borough)	...	328	117	181	26	56	44	4	—
Brentford	...	554	9	...	...	...	...	...	—
Chiswick	...	376	25	...	...	...	34	8	—
Ealing (Borough)	...	161	112	...	...	...	112	50	—
Edmonton	...	791	67	Teddington	...	...	193	45	—
Enfield	...	501	46	Tottenham	...	...	1,462	76	—
Feltham	...	126	30	Twickenham	...	...	414	55	—
Finchley	...	109	56	Uxbridge	...	...	96	55	—
Friern Barnet	...	128	14	Wealdstone	...	...	87	5	—
Greenford	...	37	10	Wembley	...	...	62	39	—
Hampton	...	117	19	Willesden	...	...	719	98	—
Hampton Wick	...	—	—	Wood Green	...	...	179	37	—
Hanwell	...	50	13	Yiewsley	...	...	75	8	—
Harrow	...	121	61	Rural—	...	...	1	67	—
Hayes	...	140	31	Hendon	...	...	—	—	35
Hendon	...	198	104	South Mimms	...	...	204	11	—
Heston and Isleworth	...	399	67	Staines	...	...	95	100	—
Hornsey (Borough)	...	212	92	Uxbridge	...	...	1,828	—	—
Kingsbury	...	1	—	Extra County	...	...	—	—	—
Ruislip-Northwood	...	43	28	TOTAL	...	...	10,218	1,621	—

Notifications.—The number of notifications received from midwives during 1924, in accordance with the Rules of the Central Midwives Board, together with similar figures for the past 4 years, for purposes of comparison, are as follows :—

—	1920.	1921.	1922.	1923.	1924.
Notifications of—					
Sending for medical assistance	1,491	1,366	1,252	1,244	1,331
Still-birth	232	159	142	141	163
Death of infant....	(6)	(25)	(19)	(14)	73
Death of mother....	(1)	(—)	(—)	(—)	5
Laying out the dead	5	9	10	16	22
Artificial feeding	38	30	49	53	43
Liability to be a source of infection	21	28	39	33	34
	1,794	1,617	1,511	1,501	1,671

NOTE.—The number of still-births notified during 1924 represents 1.59 per cent. of the total births attended by midwives.

The figures with regard to deaths of infants and mothers during 1924 are not comparable with those (given in brackets) for previous years. Owing to an alteration in the Rules of the Central Midwives Board, midwives are required to notify all deaths of mothers and infants occurring in their practices, whereas, previous to 1924, they were required to notify such deaths only in cases where medical practitioners had not arrived at the cases before the deaths took place.

The classification of the notifications of sending for medical assistance during the same years is given below :—

—	1920.	1921.	1922.	1923.	1924.
Ante-natal	117	66	56	60	82
During labour	699	723	625	576	714
During lying-in period	247	180	172	241	141
For infant	428	397	399	367	394
	1,491	1,366	1,252	1,244	1,331

Puerperal Fever.—Under the Rules of the Central Midwives Board, midwives are required to send for medical assistance in all cases of "rise of temperature above 100·4° F. with quickening of the pulse, for more than 24 hours," and to notify the Local Supervising Authority that this has been done. Thus early information of the occurrence of cases of puerperal fever, even before a definite diagnosis has been established, is in the possession of the County Council. Co-operation with the Medical Officers of Health of the several sanitary districts in the County is fully established, and the latter notify me at once whenever they receive a notification of puerperal fever relating to a case in which a certified midwife has acted either as midwife or nurse. From whatever source the information is obtained, immediate steps are taken to investigate the case with a view to preventing any spread of infection, and, at the same time, enquiries are instituted with a view to ascertaining whether there is any evidence of negligence or carelessness on the part of the midwife concerned. District Medical Officers of Health render valuable aid in arranging for the disinfection of the midwives' clothing, &c., at the conclusion of her attendance on the patient, and disinfection of the premises if this is desired, or if the case has arisen at a registered lying-in home.

During 1924 the total number of cases attended by midwives which were notified as suffering from puerperal fever was 16; 5 proved fatal, the others made good recovery.

Year.	Total number of Registered Births.	Total number of cases of Puerperal Fever notified.	Number of deaths from Puerperal Sepsis.	Number of births attended by Midwives.	Cases of Puerperal Fever in practices of Midwives.	Deaths from Puerperal Sepsis amongst Midwives' cases.
1914	...	28,147	74	34	12,218	24
1915	...	25,995	55	24	10,580	13
1916	...	25,524	72	34	10,871	18
1917	...	20,422	41	20	8,875	13
1918	...	19,010	33	28	8,426	11
1919	...	20,569	68	35	9,526	15
1920	...	29,842	79	49	12,396	20
1921	...	25,191	80	34	11,300	18
1922	...	23,775	57	35	10,884	17
1923	...	23,172	67	36	10,246	16
1924	...	21,993	55*	34	10,218	16*

* These figures relate to the period of 53 weeks ended 3rd January, 1925.

Ophthalmia neonatorum.—The risk of permanent injury to vision resulting from this complaint is very great unless efficient and continuous treatment is undertaken at the earliest possible moment. Although it is the duty of a certified midwife to notify to the Local Medical Officer of Health cases of ophthalmia neonatorum on which she is in attendance, delay might well result if action were to be postponed until the midwife is satisfied that this serious disease is actually present. Under the Rules of the Central Midwives Board, however, it is an obligation on midwives to send for a doctor in all cases in which an infant has "inflammation of or discharge from the eyes, however slight." This wise precaution ensures that medical assistance is available at the earliest possible moment, and the figures set out below show that midwives in this County are well aware of the dangers of the disease, and are conscientious in their obedience to this Rule. It will be noted that 63 out of a total of 104 (or 60·6 per cent.) of the cases in which a midwife summoned medical aid on account of the condition of infants' eyes proved not to be cases of ophthalmia neonatorum ; further, the circumstances that no permanent injury to vision resulted in any case confirms the fact that early treatment is general throughout the area.

Cases in which a doctor was called in on account of infants' eyes	...	...	...	104
Cases which proved not to be ophthalmia neonatorum	...	...	...	63
Cases later notified as ophthalmia neonatorum				41
Cases in which permanent injury to vision resulted	...	...	...	Nil.

Inspection.—The work of inspection of the midwives in the County has been carried out by the Council's Inspectors of Midwives, Miss A. A. I. Pollard and Miss C. A. M. Coleman, under the general supervision of the County Medical Officer and his deputy. I desire again to record the able manner in which these officers have carried out their exacting duties.

The number of visits made by the Inspectors during 1924 was as follows :—

Visits to notified midwives	...	...	...	1,064
„ midwives who have not notified	...	...	...	41
„ women not certified under the Midwives Act	...	...	...	27
„ patients' homes in connection with cases of ophthalmia, &c.	...	...	...	237
„ other persons in connection with investigations under the Midwives Acts	...	...	...	144
„ premises in connection with the registration of lying-in homes	...	...	...	258
Total	...	...	...	1,771

The above visits to midwives include routine visits of inspection, enquiry into all notifications as to sending for medical aid, &c. Any notification relating to high temperature, inflammation of or discharge from infants' eyes, puerperal fever, rash on infants, or liability to be a source of infection, is dealt with as "urgent," and the midwife is visited at once, in order to ensure that every precaution is taken against the spread of infection, and that efficient treatment has, in fact, been obtained.

Action taken.

One midwife was reported to the Central Midwives Board during the year, and her name was removed from the Roll.

3 midwives voluntarily resigned from the Midwives Roll and surrendered their certificates.

On the instruction of the Maternity and Child Welfare Committee, cautionary letters were sent to two certified midwives and five women not certified under the Midwives Act.

15 certified midwives and 10 other women were cautioned by the Inspectors.

Payment of Fees to Medical Practitioners.—In accordance with the provisions of Section 14 of the Midwives Act, 1918, the County Council is required to pay the fees of any doctors called in by midwives in accordance with Rule E 20 of the Central Midwives Board. A scale of fees has been prescribed by the Ministry of Health, and certain conditions as to cases in which payments cannot be made are laid down therein. The County Council have the further duty of recovering from the patient, her husband, or other person liable for her maintenance, the fees paid, except in cases of poverty.

Information as to this branch of the Council's work is given below.

FEES PAID TO MEDICAL PRACTITIONERS UNDER SECTION 14 OF THE MIDWIVES ACT, 1918.

A. Year.	B. Number of notifications of sending for Medical Aid.	C. Number of Claims for fees received.	D. Income received from Patients in respect of Doctors' fees.
1920	1,491	377	£ 1920-21
1921	1,366	503	546 0 6
1922	1,252	573	1921-22 822 1 0
1923	1,244	614	1922-23 790 4 6
1924	1,331	622	1923-24 683 9 0
			1924-25 901 7 6
			1920-21 115 0 2
			1921-22 106 15 6
			1922-23 125 10 10
			1923-24 205 17 4
			1924-25 224 6 2

Lectures to Midwives.—In the course of 1924 efforts were successful in establishing the third local association of practising midwives in the County. This marks the completion of a scheme which has been in progress for some years. One or other of the three associations now formed and situated in the north, north-west or central, and south-west districts of the County respectively, is fairly convenient of access for any midwife practising in the area, and the monthly meetings of the midwives afford useful opportunities for discussion and agreement on various questions which arise in the active practice of midwifery. In order to encourage the associations, and at the same time increase their educational value, in December the Council approved of the giving by the Deputy County Medical Officer of a course of six lectures to each association on the subjects of ante-natal care and midwifery. A comprehensive syllabus was drawn up, and Dr. Ash, the Deputy County Medical Officer, commenced the series of lectures early in 1925. It is unnecessary to enumerate the very many difficulties which a practising midwife has to face before she can arrange to attend special "refresher" courses of instruction at approved training centres, difficulties which in many cases render such attendance impossible, and, having regard to the conditions under which the majority of midwifery practices are carried on, equally is it unnecessary to stress the need for such courses. The results, therefore, of the system about to be tried in the County, which provides systematic instruction attended with the minimum of inconvenience to the participants, will be awaited with interest.

Registration of Lying-in Homes.

Under the Middlesex County Council (General Powers) Act, 1921, authority was granted to the Council to enforce the registration with the Council of all "lying-in homes" in the County, i.e., "any premises used or represented as being or intended to be used (whether regularly or on any occasion) for the reception of women for the purposes of child-birth where any payment or reward is made or given

by or on behalf of any woman received therein in respect of such reception." Full details of the pertinent clauses, showing the exceptions to the above definition and the nature of lying-in accommodation exempt from the operation of the Act, were set out in the Annual Report for 1922; similarly the Annual Report for 1923 contained (as an appendix) the text of the Bye-Laws passed by the Council under Part VI of the Act, and reference should be made to these Reports for fuller information.

In addition to visits to premises for which application for registration has been received, systematic inspection of existing lying-in homes is carried out. During 1924 a total of 258 visits to lying-in homes was made by one or other of the Council's Inspectors of Midwives who have been approved by the Council for this purpose, and in special cases the Inspector was accompanied by the County Medical Officer or his Deputy, who also have received authority from the County Council under the terms of the Act:

When necessary, attention was drawn to the requirements of the Bye-Laws and assistance afforded with regard to the keeping of the authorized register of patients, &c.

The number of lying-in homes on the Council's Register at the commencement of 1924 was 106, with a total approved accommodation for 339 patients. During the course of the year 28 applications for registration were received. Of these, 3 were voluntarily withdrawn by the applicants after visits of inspection had been made, 4 were refused by the Maternity and Child Welfare Committee of the Council on the grounds of unsuitability either of the applicant or of the premises, whilst 21 were added to the Register. In the same period the Registration of 17 homes was cancelled. Eleven of these homes were deleted from the Register on account of removals, 1 owing to change of proprietorship, and 5 to voluntary request from the proprietors. Of the 11 removals, 2 proprietors left the County, 6 established new homes in the County which are included in the 21 additional registrations referred to above, 3 established new homes but these were not ready for registration by the close of the year. The home which changed proprietorship was added to the register under the new management, and also was included in the registrations effected in 1924.

Rather more than half (viz., 66) of the 110 lying-in homes in the County belong to certified midwives. In the case of 36 of these homes the midwives restrict their practice to the in-patients at their establishments. The 30 homes belonging to midwives who engage in district work, in addition to receiving resident cases, have accommodation for 68 cases. Four of these, with accommodation for a total of 24 patients, have two certified midwives resident thereat, and this ensures a qualified midwife being available at the home during the absence of her partner on district work. In the 26 homes where this practice does not obtain the number of patients which can be accommodated is small, viz., 3 cases each at 2 homes, 2 cases each at 14 homes, and 1 case each at 10 homes.

In addition to the lying-in homes registered by the Council, 4 homes belonging to medical practitioners are exempted from registration in virtue of the provisions of Section 56 of the Act. During the year it was ascertained in three cases that women had been admitted for their confinements to premises which were not on the Council's Register. The circumstances of each case were considered by the Maternity and Child Welfare Committee, and letters of warning calling attention to the provisions of the Middlesex County Council (General Powers) Act, 1921, were sent. No evidence of any further breach of the Act has been obtained.

The following table shows the number of registered lying-in homes, with accommodation, in each sanitary district in the County:—

District.			Number of Lying-in Homes on Register.	Number of Beds available.
<i>Urban—</i>				
Acton (<i>Borough</i>)	...	...	5	15
Brentford	...	...	1	2
Chiswick	...	...	5	15
Ealing (<i>Borough</i>)	...	...	13	52
Edmonton	...	...	3	7
Enfield	...	...	1	3

District.	Number of Lying-in Homes on Register.	Number of Beds available.
<i>Urban—continued.</i>		
Feltham	1	3
Finchley	5	12
Friern Barnet	2	5
Greenford	—	—
Hampton	1	4
Hampton Wick	—	—
Hanwell	3	5
Harrow	3	11
Hayes...	—	—
Hendon	4	10
Heston & Isleworth	4	7
Hornsey (<i>Borough</i>)	15	52
Kingsbury	—	—
Ruislip-Northwood	—	—
Southall-Norwood	—	—
Southgate	4	17
Staines	1	3
Sunbury	—	—
Teddington	4	25
Tottenham	5	14
Twickenham	3	20
Uxbridge	2	7
Wealdstone	—	—
Wembley	1	10
Willesden	12	33
Wood Green	4	9
Yiewsley	—	—
<i>Rural—</i>		
Hendon	7	16
South Mimms	—	—
Staines	1	2
Uxbridge	—	—
The County	110	359

Milk, Dairies, and Milkshops.

Apart from action under the Sale of Food and Drugs Acts, which is dealt with in the next section of this Report, the County Council has no powers with regard to the milk supply, except such as are contained in the Milk (Special Designations) Order, 1923, issued by the Ministry of Health under the Milk and Dairies (Amendment) Act, 1922.

In this Order certain conditions of production which have to be conformed with, and standards of bacteriological purity of milk which have to be maintained, are set out ; and power is given to issue licences to milk producers who so desire and comply with the requirements. Milk sold under these licences is termed "designated milk," and the order contains four separate "designations" :—

- (1) Certified milk.—This is milk produced from herds which are shown to be free from tuberculosis as result of tests with tuberculin.
The standard of bacteriological purity required for milk of this grade is very high.
- (2) Grade A (Tuberculin tested).—This milk is produced from herds free from tuberculosis, but the standard of bacteriological purity required, although high, is below that of "certified milk."
- (3) Grade A.—This milk is of the same degree of bacteriological purity as (2), but the herd is not required to be tested with tuberculin.
- (4) Pasteurised milk.—This milk must be pasteurised by an approved method, and must attain a higher degree of bacteriological purity than Grade A, although not so high as in the case of certified milk.

The Order places the duty of licensing *distributors* of "designated" milks upon Local Sanitary Authorities, but power to issue licences for *production* of such milk varies according to the actual designation concerned. Producers of Certified and Grade A (Tuberculin tested) milk are licensed

by the Ministry of Health, licences for the production of Grade A milk are issued by County Councils, whilst the duty of licensing the pasteurisation of milk rests with Local Sanitary Authorities.

In the past year three producers of Certified milk in Middlesex have held licences granted by the Ministry of Health, and one producer of Grade A milk has held a licence granted by the County Council.

During 1924 the Middlesex Education Committee of the County Council had under consideration the desirability of instituting a "clean milk competition" in the County. Although Middlesex is not one of the large milk producing counties, it was felt that there existed a sufficient number of milk herds in the area to justify the proposal. A dairy, husbandry and poultry instructor was appointed, and steps taken to inaugurate the competition.

The objects of a clean milk competition are defined by the Board of Agriculture as follows :—"To demonstrate to producers and employees that without expensive plant and specially constructed buildings it is possible to produce milk of high hygienic quality which will keep well." A clean milk competition, therefore, whilst being of an educative character, exercises a very valuable influence on the quality of an important item in the food supply of the people, more especially of the children, and is, in fact, a public health measure in the true sense of the term.

The objects of the competition are attained by visits to competitors, both before and during the course of the competition, by the Committee's Dairy Instructor, who gives advice to producers and arranges for the taking of a series of samples of milk for bacteriological examination and testing for keeping property. Competitors are kept informed of the results of the periodic examinations of their milk, and any evidence of falling away from a standard already attained is discussed with the producer concerned, with a view to discovering the probable cause, and preventing a similar error in method in the future. The following rules have been printed in poster form and are supplied to competitors for exhibition in a conspicuous position in the cowsheds :—

COWSHED RULES FOR CLEAN MILK PRODUCTION.

1. The cow must be healthy.
 2. The shed must be clean, well lighted and ventilated. The surroundings also should be clean.
 3. Any operation likely to produce dust just before or during milking must be avoided.
 4. The cow must be clean. Washing with water gives the best result.
 5. After washing, the udder and teats must be wiped with a clean damp cloth.
 6. The milker's hands and clothes must be clean. The milking stool must also be clean.
 7. The milk pail should have as small an opening as can be used.
 8. The first stream of milk from each teat should be rejected and the practice of wet-handed milking should be avoided.
 9. Milk should be removed from the cowshed immediately after milking, and strained.
 10. Milk should be handled in a clean, airy, well lighted shed kept solely for the purpose.
 11. Milk must be cooled. Cool to 50 deg. F. where possible, otherwise to the lowest temperature obtainable.
 12. Milk should be kept as cool as possible in closed vessels during storage and transit.
 13. Milk utensils, including the cooler, should be rinsed with cold water immediately after use.
 14. After rinsing, the utensils should be thoroughly washed and scrubbed with hot water to which soda has been added.
 15. After washing, rinse utensils in clean water and sterilise by steam.
 16. Sterilisation depends entirely on heating the utensils to a sufficiently high temperature for a sufficient period of time. Scalding will not sterilise.
 17. Sterilised utensils must be protected from contamination until required.
 18. Straining cloths and udder cloths and everything that comes either directly or indirectly in contact with the milk must be washed and sterilised after each milking.
- Rules compiled by the National Institute for Research in Dairying,
and issued by the Middlesex Education Committee,
Agricultural Education Sub-Committee,
40, Eccleston Square, S.W. 1.

Entries for the competition were received in November, and although the response was not large (viz., 10 producers), it is proposed to repeat the competition in 1925, when, with the wider publicity which has been afforded to the scheme, together with the co-operation and assistance of Local Health Authorities, it is hoped and expected that the number of competitors will be largely increased.

Food and Drugs Acts. Public Health (Milk and Cream) Regulations, 1912 and 1917.

The following particulars—showing work carried out during 1924 by the County Council in connection with the food supply—have been prepared by R. Robinson, Esq., the Chief Officer of the Public Control Department:—

SALE OF FOOD AND DRUGS ACTS.

Article.	Formal Samples.		Informal Samples.	
	Taken.	Adul-terated.	Taken.	Adul-terated.
Apples, tinned	...	—	1	—
Baking powder	...	—	5	—
Beer	—	16	—
Blanc mange	...	—	1	—
Borax	...	2	35	8
Borax, purified	...	6	3	—
Boric acid	...	—	6	1
Brown	...	—	5	—
Bread	...	—	1	—
Bun flour	...	—	4	—
Butter	...	2	95	5
Chalk, prepared	...	—	6	—
Cherries, preserved	—	—	1	—
Cocoa	...	—	12	—
Coffee	...	1	1	1
Cream	...	13	—	—
Cream, preserved	...	1	8	—
Cream of tartar	...	—	25	—
Custard powder	...	—	1	—
Dripping	...	—	9	—
Fish paste	...	1	14	1
Flour	...	—	2	—
Flour, self-raising	...	—	12	—

Article.	Formal Samples.		Informal Samples.	
	Taken.	Adul- terated.	Taken.	Adul- terated.
Ginger beer	—	2	—
Ginger, ground	...	—	1	—
Green peas	—	2	—
Honey	—	23	—
Infant's food	...	—	1	1
Lard	...	—	1	—
Margarine	...	—	1	—
Milk ...	1,065	95	7	—
Milk, separated	9	—	—	—
Milk, dried	—	1	—
Milk, condensed—				
Sweetened	...	3	7	—
Unsweetened	...	—	1	—
Skimmed	2	19	3
Mineral water	...	—	2	—
Olive oil	—	1	—
Paraffin, liquid	...	—	2	—
Paregoric	—	1	—
Pastries	—	5	—
Pepper	—	6	—
Potash, bicarbonate of	...	—	6	—
Potash, chlorate	...	—	6	—
Prescriptions	...	27	4	—
Sago	—	2	—
Sauce	...	—	3	1
Sausage	...	—	8	1
Sweets	...	—	1	—
Tapioca	...	—	1	—
Vinegar	...	1	—	—
Total	...	1,133	114	373
				22

The following are details of the work done under the Public Health (Milk and Cream) Regulations, 1912 and 1917 :—

1. *Milk and Cream not Sold as Preserved Cream.*

—	(a) Number of Sam- ples examined for the presence of a Preservative.	(b) Number in which a Preservative was reported to be present.
Milk	1,081	0
Cream	13	10

In addition to the above, officers of the Public Control Department examined by rough sorting out tests, 75 informal samples of cream, of which 24 were found to contain boracic acid.

The nature of the preservative in each case in column (b) and the action taken are as follows :—

<i>Cream—</i>	Per cent.	Explanation
Sample 1...	Boracic Acid ...	
„ 2...	„ ...	0·39
„ 3...	„ ...	0·19
„ 4...	„ ...	0·39
„ 5...	„ ...	0·33
„ 6...	„ ...	0·35
„ 7...	„ ...	Fine £10 and £1 1s. costs.
„ 8...	„ ...	Fine £5 and £1 1s. costs.
		Fine £2 and 15s. costs.
		Fine £2 and 15s. costs.

<i>Cream</i> —cont.		Per cent.
Sample 9...	Boracic Acid ...	0·38 Fine £3 and 15s. costs.
,, 10...	,, ...	0·38 Fine £2 and £1 1s. costs.

In all cases the convictions were recorded under Section 6 of the Sale of Food and Drugs Act, 1875.

2. *Cream sold as Preserved Cream.*

(a) Instances in which samples have been submitted for analysis to ascertain if the statements on the label as to preservatives were correct:—

(i) Correct statements made	...	...	...	9
(ii) Statements incorrect ...	...	...	...	0
Total	...	...	...	9

(b) Determinations made of milk fat in cream sold as preserved cream:—

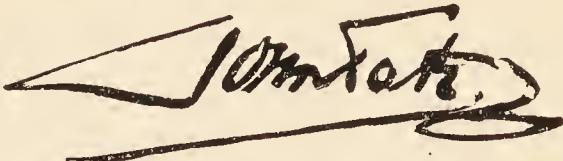
(i) Above 35 per cent.	...	...	...	11
(ii) Below 35 per cent.	...	...	...	0
Total	...	...	...	11

(c) Instances where (apart from analysis) the requirements as to labelling or declaration of preserved cream in Article V (1) and the proviso in Article V (2) of the Regulations have not been observed—Nil.

(d) Particulars of each case in which the Regulations have not been complied with—Nil.

3. *Thickening substances.*—Nil.

* Including 2 samples examined by Officers of the Public Control Department.



GUILDHALL, WESTMINSTER,

County Medical Officer.

June, 1925.

